

006-4498-10

<120> SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
ACIDS ENCODING THE SAME

<150> 60/070,440

SECRET

<151> February 9, 1998

<151> February 9, 1998

<151> February 25, 1998

<151> December 16, 1998

<151> December 22, 1998

<151> July 28, 1999

<151> September 16, 1998

<151> December 1, 1998

<151> December 16, 1998

<151> December 22, 1998

<151> March 3, 1999

<151> June 22, 1999

<151> September 15, 1999

<151> November 30, 1999

<151> November 30, 1999

<151> December 1, 1999

<151> December 16, 1999

<151> February 11, 2000

<151> February 22, 2000

<150> PCT/US00/05841
 <151> March 2, 2000

<150> PCT/US00/08439
 <151> March 30, 2000

<150> PCT/US00/14042
 <151> May 22, 2000

<150> PCT/US00/20710
 <151> July 28, 2000

<150> PCT/US00/32678
 <151> December 1, 2000

<150> PCT/US01/06520
 <151> February 28, 2001

<160> 120

<210> 1
 <211> 2454
 <212> DNA
 <213> Homo Sapien

<400> 1
 ggactaatct gtgggagcag tttattccag tatcaccag ggtgcagcca 50
 caccaggact gtgttgaagg gtgtttttt tcttttaaat gtaatacctc 100
 ctcatctttt cttcttacac agtgtctgag aacatttaca ttatagataa 150
 gtagtacatg gtggataact tctactttta ggaggactac tctcttctga 200
 cagtcctaga ctgggtcttct acactaagac accatgaagg agtatgtgct 250
 cctattattc ctgggtttgt gctctgcaa acccttcttt agcccttcac 300
 acatcgact gaagaatatg atgctgaagg atatggaaga cacagatgat 350
 gatgatgatg atgatgatga tgatgatgat gatgaggaca actctctttt 400
 tccaacaaga gagccaagaa gccatttttt tccatttgat ctgtttccaa 450
 tgtgtccatt tggatgtcag tgctattcac gagttgtaca ttgctcagat 500
 ttaggtttga cctcagtcac aaccaacatt ccatttgata ctggaatgct 550
 tgatcttcaa aacaataaaa ttaaggaaat caaagaaaat gattttaaag 600
 gactcacttc actttatggt ctgacctga acaacaacaa gctaacgaag 650
 attcaccacaa aagcctttct aaccacaaag aagttgcgaa ggctgtatct 700
 gtcccacaat caactaagtg aaataccact taatcttccc aaatcattag 750
 cagaactcag aattcatgaa aataaagtta agaaaatata aaaggacaca 800

0994436-03104

ttcaaaggaa tgaatgcttt acacgttttg gaaatgagtg caaacctct 850
 tgataataat gggatagagc caggggcatt tgaaggggtg acggtgttcc 900
 atatcagaat tgcagaagca aaactgacct cagttcctaa aggcttacca 950
 ccaactttat tggagcttca cttagattat aataaaattt caacagtgga 1000
 acttgaggat tttaaacgat acaaagaact acaaaggctg ggcctaggaa 1050
 acaacaaaat cacagatata gaaaatggga gtcttgctaa cataccacgt 1100
 gtgagagaaa tacatttgga aaacaataaa ctaaaaaaaaa tcccttcagg 1150
 attaccagag ttgaaatacc tccagataat cttccttcat tctaattcaa 1200
 ttgcaagagt gggagtaaata gacttctgtc caacagtgcc aaagatgaag 1250
 aaatctttat acagtgcaat aagtttatc aacaaccgg tgaaatactg 1300
 ggaaatgcaa cctgcaacat ttcgttgtgt tttgagcaga atgagtgttc 1350
 agcttgggaa ctttggaatg taataattag taattggtaa tgtccattta 1400
 atataagatt caaaaatccc tacatttgga atacttgaac tctattaata 1450
 atggtagtat tatatataca agcaaatac tattctcaag tggtaagtcc 1500
 actgacttat tttatgacaa gaaatttcaa cggaattttg ccaaactatt 1550
 gatacataag ggggtgagag aaacaagcat ctattgcagt ttcctttttg 1600
 cgtacaaatg atcttacata aatctcatgc ttgaccattc ctttcttcat 1650
 aacaaaaaag taagatattc ggtatttaac actttgttat caagcacatt 1700
 ttaaaaagaa ctgtactgta aatggaatgc ttgacttagc aaaatttggt 1750
 ctctttcatt tgctgttaga aaaacagaat taacaaagac agtaatgtga 1800
 agagtgcatt acactattct tattctttag taacttgggt agtactgtaa 1850
 tatttttaat catcttaaag tatgatttga tataatctta ttgaaattac 1900
 cttatcatgt cttagagccc gtctttatgt ttaaaactaa tttcttaaaa 1950
 taaagccttc agtaaagtgt cattaccaac ttgataaatg ctactcataa 2000
 gagctgggtt ggggctatag catatgcttt ttttttttta attattacct 2050
 gatttaaaaa tctctgtaaa aacgtgtagt gtttcataaa atctgtaact 2100
 cgcattttta tgatccgcta ttataagctt ttaatagcat gaaaattggt 2150
 aggctatata acattgccac ttcaactcta aggaatattt ttgagatata 2200
 cctttggaag accttgcttg gaagagcctg gacactaaca attctacacc 2250

aaattgtctc ttcaaatacg tatggactgg ataactctga gaaacacatc 2300
tagtataact gaataagcag agcatcaaat taaacagaca gaaaccgaaa 2350
gctctatata aatgctcaga gttctttatg tatttcttat tggcattcaa 2400
catatgtaaa atcagaaaac agggaaattt tcattaataaa tattgggttg 2450
aaat 2454

<210> 2
<211> 379
<212> PRT
<213> Homo Sapien

<400> 2
Met Lys Glu Tyr Val Leu Leu Leu Phe Leu Ala Leu Cys Ser Ala
1 5 10 15
Lys Pro Phe Phe Ser Pro Ser His Ile Ala Leu Lys Asn Met Met
20 25 30
Leu Lys Asp Met Glu Asp Thr Asp Asp Asp Asp Asp Asp Asp
35 40 45
Asp Asp Asp Asp Asp Glu Asp Asn Ser Leu Phe Pro Thr Arg Glu
50 55 60
Pro Arg Ser His Phe Phe Pro Phe Asp Leu Phe Pro Met Cys Pro
65 70 75
Phe Gly Cys Gln Cys Tyr Ser Arg Val Val His Cys Ser Asp Leu
80 85 90
Gly Leu Thr Ser Val Pro Thr Asn Ile Pro Phe Asp Thr Arg Met
95 100 105
Leu Asp Leu Gln Asn Asn Lys Ile Lys Glu Ile Lys Glu Asn Asp
110 115 120
Phe Lys Gly Leu Thr Ser Leu Tyr Gly Leu Ile Leu Asn Asn Asn
125 130 135
Lys Leu Thr Lys Ile His Pro Lys Ala Phe Leu Thr Thr Lys Lys
140 145 150
Leu Arg Arg Leu Tyr Leu Ser His Asn Gln Leu Ser Glu Ile Pro
155 160 165
Leu Asn Leu Pro Lys Ser Leu Ala Glu Leu Arg Ile His Glu Asn
170 175 180
Lys Val Lys Lys Ile Gln Lys Asp Thr Phe Lys Gly Met Asn Ala
185 190 195
Leu His Val Leu Glu Met Ser Ala Asn Pro Leu Asp Asn Asn Gly
200 205 210

00544396.083101

<210> 5
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 5
gggtgacggt gttccatatt agaattgcag aagcaaaact gacctcagtt 50

<210> 6
<211> 3441
<212> DNA
<213> Homo Sapien

<400> 6
cggacgcgtg ggcggacgcg tgggcccgcg gcaccgcccc cggcccggcc 50
ctccgccctc cgcactcgcg cctccctccc tccgcccgct cccgcgccct 100
cctccctccc tctccccag ctgtcccggt cgcgtcatgc cgagcctccc 150
ggccccgcgg gcccgctgc tgcctctcgg gctgctgctg ctccggtccc 200
ggccggcccc cggcgccggc ccagagcccc ccgtgctgcc catccgttct 250
gagaaggagc cgctgcccgt tcggggagcg gcaggctgca ccttcggcgg 300
gaaggtctat gccttggaag agacgtggca ccgggacctt gggcagccat 350
tcgggggtgat gcgctgcgtg ctgtgcgcct gcgaggcgcc tcagtggggg 400
cgccgtacca ggggccctgg cagggtcagc tgcaagaaca tcaaaccaga 450
gtgccaacc ccggcctgtg ggcagccgcg ccagctgccg ggacactgct 500
gccagacctg cccccaggag cgcagcagtt cggagcggca gccgagcggc 550
ctgtccttcg agtatccgcg ggaccgggag catcgagtt atagcgaccg 600
cggggagcca ggcgctgagg agcggggccc tggtgacggc cacacggact 650
tcgtggcgct gctgacaggg ccgaggtcgc aggcgggtggc acgagcccga 700
gtctcgctgc tgcgctctag cctccgcttc tctatctcct acaggcggct 750
ggaccgccct accaggatcc gcttctcaga ctccaatggc agtgtcctgt 800
ttgagcacc tgcagcccc acccaagatg gcctggctctg tggggtgtgg 850
cgggcagtgc ctccggtgtc tctgcggctc cttagggcag aacagctgca 900
tgtggcactt gtgacactca ctcacccttc aggggaggtc tgggggcctc 950
tcatccggca ccgggccctg gctgcagaga ccttcagtgc catcctgact 1000
ctagaaggcc cccacagca gggcgtaggg ggcacacccc tgctcactct 1050

0594496-03101

0994496.083101

cagtgcacaca gaggactcct tgcatttttt gctgctcttc cgagggctgc 1100
tggaaccag gagtggggga ctaaccagg ttcccttgag gctccagatt 1150
ctacaccagg ggcagctact gcgagaactt caggccaatg tctcagccca 1200
ggaaccaggc tttgctgagg tgctgcccac cctgacagtc caggagatgg 1250
actggctggt gctgggggag ctgcagatgg ccctggagtg ggcaggcagg 1300
ccagggctgc gcatcagtgg acacattgct gccaggaaga gctgcgacgt 1350
cctgcaaagt gtcctttgtg gggctgatgc cctgatccca gtccagacgg 1400
gtgctgccgg ctacagccagc ctacagctgc taggaaatgg ctccctgate 1450
tatcaggtgc aagtggtagg gacaagcagt gaggtggtgg ccatgacact 1500
ggagaccaag cctcagcggg gggatcagcg cactgtcctg tgccacatgg 1550
ctggactcca gccaggagga cacacggccg tgggtatctg ccctgggctg 1600
ggtgcccag gggctcatat gctgctgcag aatgagctct tectgaacgt 1650
gggcaccaag gacttcccag acggagagct tcgggggcac gtggctgccc 1700
tgccctactg tgggcatagc gcccgccatg acacgctgcc cgtgccccta 1750
gcaggagccc tgggtctacc ccctgtgaag agccaagcag cagggcacgc 1800
ctggctttcc ttggataccc actgtcacct gcactatgaa gtgctgctgg 1850
ctgggcttgg tggctcagaa caaggcactg tcaactgcca cctccttggg 1900
cctcctggaa cgccagggcc tcggcggtg ctgaagggat tctatggctc 1950
agaggcccag ggtgtggtga aggacctgga gccggaactg ctgcggcacc 2000
tggcaaaagg catggcctcc ctgatgatca ccaccaaggg tagccccaga 2050
ggggagctcc gagggcaggg gcacatagcc aaccaatgtg aggttggcgg 2100
actgcgctg gaggcggccg gggccgaggg ggtgcgggcg ctgggggctc 2150
cggatacagc ctctgctgcg ccgcctgtgg tgctggtct cccggcccta 2200
gcgcccgcca aacctggtgg tcttgggagg ccccagagacc ccaacacatg 2250
cttcttcgag gggcagcagc gccccacagg ggctcgctgg gcgcccact 2300
acgaccgct ctgtcactc tgcacctgcc agagacgaac ggtgatctgt 2350
gaccgggtg tgtgcccacc gccagctgc ccacacccgg tgcaggctcc 2400
cgaccagtgc tgccctgttt gccctgagaa acaagatgtc agagacttgc 2450
cagggctgcc aaggagccgg gaccaggag agggctgcta ttttgatggt 2500

00044396-083101

gaccggagct ggcgggcagc gggtagcgcg tggcaccgct ttgtgcccc 2550
 ctttggttta attaatgtg ctgtctgcac ctgcaagggg ggcactggag 2600
 aggtgcactg tgagaagggt cagtgtcccc ggctggcctg tgcccagcct 2650
 gtgctgtca accccaccga ctgtgcaaa cagtgtccag tggggtcggg 2700
 ggccaccccc cagctggggg accccatgca ggctgatggg ccccggggct 2750
 gccgttttgc tgggcagtgg ttcccagaga gtcagagctg gcaccctca 2800
 gtgccccctt ttggagagat gagctgtatc acctgcagat gtggggcagg 2850
 ggtgcctcac tgtgagcggg atgactgttc actgccactg tcctgtggct 2900
 cggggaagga gagtcatgc tgttcccgct gcacggccca cggcgggccc 2950
 ccagagacca gaactgatcc agagctggag aaagaagccg aaggctctta 3000
 gggagcagcc agagggccaa gtgaccaaga ggatggggcc tgagctgggg 3050
 aaggggtggc atcagaggacc ttcttgcatc ctctgtggg aagcccagt 3100
 cctttgctcc tctgtcctgc ctctactccc acccccacta cctctgggaa 3150
 ccacagctcc acaaggggga gaggcagctg ggccagaccg aggtcacagc 3200
 cactccaagt cctgccctgc caccctcggc ctctgtcctg gaagccccac 3250
 ccccttcctc ctgtacataa tgtcactggc ttgttgggat ttttaattta 3300
 tcttactca gcaccaaggg ccccgacac tccactcctg ctgcccctga 3350
 gctgagcaga gtcattattg gagagttttg tatttattaa aacatttctt 3400
 tttcagtcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 3441

<210> 7
 <211> 954
 <212> PRT
 <213> Homo Sapien

<400> 7
 Met Pro Ser Leu Pro Ala Pro Pro Ala Pro Leu Leu Leu Leu Gly
 1 5 10 15
 Leu Leu Leu Leu Gly Ser Arg Pro Ala Arg Gly Ala Gly Pro Glu
 20 25 30
 Pro Pro Val Leu Pro Ile Arg Ser Glu Lys Glu Pro Leu Pro Val
 35 40 45
 Arg Gly Ala Ala Gly Cys Thr Phe Gly Gly Lys Val Tyr Ala Leu
 50 55 60
 Asp Glu Thr Trp His Pro Asp Leu Gly Gln Pro Phe Gly Val Met
 65 70 75

TOFEBD 96B44660

Arg Cys Val Leu Cys Ala Cys Glu Ala Pro Gln Trp Gly Arg Arg	80	85	90
Thr Arg Gly Pro Gly Arg Val Ser Cys Lys Asn Ile Lys Pro Glu	95	100	105
Cys Pro Thr Pro Ala Cys Gly Gln Pro Arg Gln Leu Pro Gly His	110	115	120
Cys Cys Gln Thr Cys Pro Gln Glu Arg Ser Ser Ser Glu Arg Gln	125	130	135
Pro Ser Gly Leu Ser Phe Glu Tyr Pro Arg Asp Pro Glu His Arg	140	145	150
Ser Tyr Ser Asp Arg Gly Glu Pro Gly Ala Glu Glu Arg Ala Arg	155	160	165
Gly Asp Gly His Thr Asp Phe Val Ala Leu Leu Thr Gly Pro Arg	170	175	180
Ser Gln Ala Val Ala Arg Ala Arg Val Ser Leu Leu Arg Ser Ser	185	190	195
Leu Arg Phe Ser Ile Ser Tyr Arg Arg Leu Asp Arg Pro Thr Arg	200	205	210
Ile Arg Phe Ser Asp Ser Asn Gly Ser Val Leu Phe Glu His Pro	215	220	225
Ala Ala Pro Thr Gln Asp Gly Leu Val Cys Gly Val Trp Arg Ala	230	235	240
Val Pro Arg Leu Ser Leu Arg Leu Leu Arg Ala Glu Gln Leu His	245	250	255
Val Ala Leu Val Thr Leu Thr His Pro Ser Gly Glu Val Trp Gly	260	265	270
Pro Leu Ile Arg His Arg Ala Leu Ala Ala Glu Thr Phe Ser Ala	275	280	285
Ile Leu Thr Leu Glu Gly Pro Pro Gln Gln Gly Val Gly Gly Ile	290	295	300
Thr Leu Leu Thr Leu Ser Asp Thr Glu Asp Ser Leu His Phe Leu	305	310	315
Leu Leu Phe Arg Gly Leu Leu Glu Pro Arg Ser Gly Gly Leu Thr	320	325	330
Gln Val Pro Leu Arg Leu Gln Ile Leu His Gln Gly Gln Leu Leu	335	340	345
Arg Glu Leu Gln Ala Asn Val Ser Ala Gln Glu Pro Gly Phe Ala	350	355	360
Glu Val Leu Pro Asn Leu Thr Val Gln Glu Met Asp Trp Leu Val			

0944396-06344650

365	370	375
Leu Gly Glu Leu Gln Met Ala Leu Glu Trp Ala Gly Arg Pro Gly		
380	385	390
Leu Arg Ile Ser Gly His Ile Ala Ala Arg Lys Ser Cys Asp Val		
395	400	405
Leu Gln Ser Val Leu Cys Gly Ala Asp Ala Leu Ile Pro Val Gln		
410	415	420
Thr Gly Ala Ala Gly Ser Ala Ser Leu Thr Leu Leu Gly Asn Gly		
425	430	435
Ser Leu Ile Tyr Gln Val Gln Val Val Gly Thr Ser Ser Glu Val		
440	445	450
Val Ala Met Thr Leu Glu Thr Lys Pro Gln Arg Arg Asp Gln Arg		
455	460	465
Thr Val Leu Cys His Met Ala Gly Leu Gln Pro Gly Gly His Thr		
470	475	480
Ala Val Gly Ile Cys Pro Gly Leu Gly Ala Arg Gly Ala His Met		
485	490	495
Leu Leu Gln Asn Glu Leu Phe Leu Asn Val Gly Thr Lys Asp Phe		
500	505	510
Pro Asp Gly Glu Leu Arg Gly His Val Ala Ala Leu Pro Tyr Cys		
515	520	525
Gly His Ser Ala Arg His Asp Thr Leu Pro Val Pro Leu Ala Gly		
530	535	540
Ala Leu Val Leu Pro Pro Val Lys Ser Gln Ala Ala Gly His Ala		
545	550	555
Trp Leu Ser Leu Asp Thr His Cys His Leu His Tyr Glu Val Leu		
560	565	570
Leu Ala Gly Leu Gly Gly Ser Glu Gln Gly Thr Val Thr Ala His		
575	580	585
Leu Leu Gly Pro Pro Gly Thr Pro Gly Pro Arg Arg Leu Leu Lys		
590	595	600
Gly Phe Tyr Gly Ser Glu Ala Gln Gly Val Val Lys Asp Leu Glu		
605	610	615
Pro Glu Leu Leu Arg His Leu Ala Lys Gly Met Ala Ser Leu Met		
620	625	630
Ile Thr Thr Lys Gly Ser Pro Arg Gly Glu Leu Arg Gly Gln Val		
635	640	645
His Ile Ala Asn Gln Cys Glu Val Gly Gly Leu Arg Leu Glu Ala		
650	655	660

Ala	Gly	Ala	Glu	Gly	Val	Arg	Ala	Leu	Gly	Ala	Pro	Asp	Thr	Ala
				665					670					675
Ser	Ala	Ala	Pro	Pro	Val	Val	Pro	Gly	Leu	Pro	Ala	Leu	Ala	Pro
				680					685					690
Ala	Lys	Pro	Gly	Gly	Pro	Gly	Arg	Pro	Arg	Asp	Pro	Asn	Thr	Cys
				695					700					705
Phe	Phe	Glu	Gly	Gln	Gln	Arg	Pro	His	Gly	Ala	Arg	Trp	Ala	Pro
				710					715					720
Asn	Tyr	Asp	Pro	Leu	Cys	Ser	Leu	Cys	Thr	Cys	Gln	Arg	Arg	Thr
				725					730					735
Val	Ile	Cys	Asp	Pro	Val	Val	Cys	Pro	Pro	Pro	Ser	Cys	Pro	His
				740					745					750
Pro	Val	Gln	Ala	Pro	Asp	Gln	Cys	Cys	Pro	Val	Cys	Pro	Glu	Lys
				755					760					765
Gln	Asp	Val	Arg	Asp	Leu	Pro	Gly	Leu	Pro	Arg	Ser	Arg	Asp	Pro
				770					775					780
Gly	Glu	Gly	Cys	Tyr	Phe	Asp	Gly	Asp	Arg	Ser	Trp	Arg	Ala	Ala
				785					790					795
Gly	Thr	Arg	Trp	His	Pro	Val	Val	Pro	Pro	Phe	Gly	Leu	Ile	Lys
				800					805					810
Cys	Ala	Val	Cys	Thr	Cys	Lys	Gly	Gly	Thr	Gly	Glu	Val	His	Cys
				815					820					825
Glu	Lys	Val	Gln	Cys	Pro	Arg	Leu	Ala	Cys	Ala	Gln	Pro	Val	Arg
				830					835					840
Val	Asn	Pro	Thr	Asp	Cys	Cys	Lys	Gln	Cys	Pro	Val	Gly	Ser	Gly
				845					850					855
Ala	His	Pro	Gln	Leu	Gly	Asp	Pro	Met	Gln	Ala	Asp	Gly	Pro	Arg
				860					865					870
Gly	Cys	Arg	Phe	Ala	Gly	Gln	Trp	Phe	Pro	Glu	Ser	Gln	Ser	Trp
				875					880					885
His	Pro	Ser	Val	Pro	Pro	Phe	Gly	Glu	Met	Ser	Cys	Ile	Thr	Cys
				890					895					900
Arg	Cys	Gly	Ala	Gly	Val	Pro	His	Cys	Glu	Arg	Asp	Asp	Cys	Ser
				905					910					915
Leu	Pro	Leu	Ser	Cys	Gly	Ser	Gly	Lys	Glu	Ser	Arg	Cys	Cys	Ser
				920					925					930
Arg	Cys	Thr	Ala	His	Arg	Arg	Pro	Pro	Glu	Thr	Arg	Thr	Asp	Pro
				935					940					945
Glu	Leu	Glu	Lys	Glu	Ala	Glu	Gly	Ser						

<210> 8
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide probe

<400> 8
 gactagttct agatcgcgag cggccgccct tttttttttt tttt 44

<210> 9
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 9
 cggacgcgtg gggcctgcgc acccagct 28

<210> 10
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 10
 gccgctcccc gaacgggcag cggctccttc tcagaa 36

<210> 11
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 11
 ggcgcacagc acgcagcgca tcaccccgaa tggctc 36

<210> 12
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 12
 gtgctgccca tccgttctga gaagga 26

<210> 13

00044896-033101

<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 13
gcagggtgct caaacaggac ac 22

<210> 14
<211> 3231
<212> DNA
<213> Homo Sapien

<400> 14
ggcggagcag ccctagccgc caccgtcgct ctgcagctc tcgtcgccac 50
tgccaccgcc gccgccgtca ctgcgtcctg gctccggctc ccgcgccctc 100
ccggccggcc atgcagcccc gccgcgcccc ggcgcccggg gcgcagctgc 150
tgcccgcgct ggccctgctg ctgctgctgc tcggagcggg gccccgaggc 200
agctccctgg ccaaccgggt gcccgccgcg cccttgctg cgcccggggc 250
gtgcgccgcg cagccctgcc ggaatggggg tgtgtgcacc tcgcgccctg 300
agccggaccc gcagcaccg gccccgccc gcgagcctgg ctacagctgc 350
acctgccccg ccgggatctc cggcgccaac tgccagcttg ttgcagatcc 400
ttgtgccagc aacccttgct accatggcaa ctgcagcagc agcagcagca 450
gcagcagcga tggctacctc tgcatttgca atgaaggcta tgaaggctccc 500
aactgtgaac aggcacttcc cagtctccca gccactggct ggaccgaatc 550
catggcacc cgcagcttc agcctgttcc tgctactcag gagcctgaca 600
aaatcctgcc tcgctctcag gcaacgggtga cactgcctac ctggcagccg 650
aaaacagggc agaaagttgt agaaatgaaa tgggatcaag tggaggtgat 700
cccagatatt gcctgtggga atgccagttc taacagctct gcgggtggcc 750
gcctgggtatc ctttgaagtg ccacagaaca cctcagtcaa gattcggcaa 800
gatgccactg cctcactgat tttgctctgg aaggtcacgg ccacaggatt 850
ccaacagtgc tccctcatag atggacgaag tgtgaccccc cttcaggctt 900
cagggggact ggtcctcctg gaggagatgc tcgccttggg gaataatcac 950
tttattggtt ttgtgaatga ttctgtgact aagtctattg tggctttgcg 1000
cttaactctg gtggtgaagg tcagcacctg tgtgccgggg gagagtcacg 1050

0994486.03101

caaatgactt ggagtgttca ggaaaaggaa aatgcaccac gaagccgtca 1100
 gaggcaactt tttcctgtac ctgtgaggag cagtacgtgg gtactttctg 1150
 tgaagaatac gatgcttgcc agaggaaacc ttgccaaaac aacgcgagct 1200
 gtattgatgc aaatgaaaag caagatggga gcaatttcac ctgtgtttgc 1250
 cttcctgggtt atactggaga gctttgccag tccaagattg attactgcat 1300
 cctagacca tgcagaaatg gagcaacatg catttccagt ctcatggat 1350
 tcacctgcca gtgtccagaa ggatacttcg gatctgcttg tgaagaaaag 1400
 gtggaccctt gcgcctcgtc tccgtgccag aacaacggca cctgctatgt 1450
 ggacggggta cactttacct gcaactgcag cccgggcttc acagggccga 1500
 cctgtgcca gcttattgac ttctgtgccc tcagccctg tgctcatggc 1550
 acgtgccgca gcgtgggcac cagctacaaa tgccctctgtg atccagggtta 1600
 ccatggcctc tactgtgagg aggaatataa tgagtgcctc tccgctccat 1650
 gcctgaatgc agccacctgc agggacctcg ttaatggcta tgagtgtgtg 1700
 tgccctggcag aatacaaagg aacacactgt gaattgtaca aggatccctg 1750
 cgctaacgtc agctgtctga acggagccac ctgtgacagc gacggcctga 1800
 atggcacgtg catctgtgca cccgggttta cagggtgaaga gtgcgacatt 1850
 gacataaatg aatgtgacag taaccctcgc caccatgggtg ggagctgcct 1900
 ggaccagccc aatgggtata actgccactg cccgcatggt tgggtgggag 1950
 caaactgtga gatccacctc caatggaagt ccgggcacat ggcggagagc 2000
 ctcaccaaca tgccacggca ctccctctac atcatcattg gagccctctg 2050
 cgtggccttc atccttatgc tgatcctcct gatcgtgggg atttgccgca 2100
 tcagccgcat tgaataccag ggttcttcca ggccagccta tgaggagttc 2150
 tacaactgcc gcagcatcga cagcgagttc agcaatgcca ttgcatccat 2200
 ccggcatgcc aggtttggaa agaaatcccg gcctgcaatg tatgatgtga 2250
 gccccatcgc ctatgaagat tacagtccctg atgacaaacc cttggtcaca 2300
 ctgattaaaa cttaaagattt gtaatctttt tttggattat ttttcaaaaa 2350
 gatgagatac tacactcatt taaatatttt taagaaaata aaaagcttaa 2400
 gaaatttaaa atgctagctg ctcaagagtt ttcagtagaa tatttaagaa 2450
 ctaattttct gcagctttta gtttgaaaaa aatattttta aaacaaaatt 2500

004489090840

tgtgaaacct atagacgatg ttttaatgta ccttcagctc tctaaactgt 2550
 gtgcttctac tagtgtgtgc tcttttcact gtagacacta tcacgagacc 2600
 cagattaatt tctgtgggtg ttacagaata agtctaata aggagaagtt 2650
 tctgtttgac gtttgagtgc cggctttctg agtagagtta ggaaaaccac 2700
 gtaacgtagc atatgatgta taatagagta taccggttac ttaaaaagaa 2750
 gtctgaaatg ttcgttttgt ggaaaagaaa ctagttaaat ttactattcc 2800
 taaccgcaat gaaattagcc tttgccttat tctgtgcatg ggtaagtaac 2850
 ttattttctgc actgttttgt tgaactttgt ggaaacattc tttcgagttt 2900
 gtttttgtca ttttcgtaac agtcgctgaa ctaggcctca aaaacatacg 2950
 taacgaaaag gcctagcgag gcaaattctg attgatttga atctatattt 3000
 ttctttaaaa agtcaagggt tctatattgt gagtaaatta aatttacatt 3050
 tgagttgttt gttgctaaga ggtagtaaata gtaagagagt actggttcct 3100
 tcagtagtga gtattttctca tagtgcagct ttatttatct ccaggatggt 3150
 tttgtggctg tatttgattg atatgtgctt cttctgattc ttgctaattt 3200
 ccaaccatat tgaataaatg tgatcaagtc a 3231

<210> 15
 <211> 737
 <212> PRT
 <213> Homo Sapien

<400> 15
 Met Gln Pro Arg Arg Ala Gln Ala Pro Gly Ala Gln Leu Leu Pro
 1 5 10 15
 Ala Leu Ala Leu Leu Leu Leu Leu Leu Gly Ala Gly Pro Arg Gly
 20 25 30
 Ser Ser Leu Ala Asn Pro Val Pro Ala Ala Pro Leu Ser Ala Pro
 35 40 45
 Gly Pro Cys Ala Ala Gln Pro Cys Arg Asn Gly Gly Val Cys Thr
 50 55 60
 Ser Arg Pro Glu Pro Asp Pro Gln His Pro Ala Pro Ala Gly Glu
 65 70 75
 Pro Gly Tyr Ser Cys Thr Cys Pro Ala Gly Ile Ser Gly Ala Asn
 80 85 90
 Cys Gln Leu Val Ala Asp Pro Cys Ala Ser Asn Pro Cys His His
 95 100 105
 Gly Asn Cys Ser Ser Ser Ser Ser Ser Ser Asp Gly Tyr Leu

110					115					120				
Cys	Ile	Cys	Asn	Glu	Gly	Tyr	Glu	Gly	Pro	Asn	Cys	Glu	Gln	Ala
125					130					135				
Leu	Pro	Ser	Leu	Pro	Ala	Thr	Gly	Trp	Thr	Glu	Ser	Met	Ala	Pro
140					145					150				
Arg	Gln	Leu	Gln	Pro	Val	Pro	Ala	Thr	Gln	Glu	Pro	Asp	Lys	Ile
155					160					165				
Leu	Pro	Arg	Ser	Gln	Ala	Thr	Val	Thr	Leu	Pro	Thr	Trp	Gln	Pro
170					175					180				
Lys	Thr	Gly	Gln	Lys	Val	Val	Glu	Met	Lys	Trp	Asp	Gln	Val	Glu
185					190					195				
Val	Ile	Pro	Asp	Ile	Ala	Cys	Gly	Asn	Ala	Ser	Ser	Asn	Ser	Ser
200					205					210				
Ala	Gly	Gly	Arg	Leu	Val	Ser	Phe	Glu	Val	Pro	Gln	Asn	Thr	Ser
215					220					225				
Val	Lys	Ile	Arg	Gln	Asp	Ala	Thr	Ala	Ser	Leu	Ile	Leu	Leu	Trp
230					235					240				
Lys	Val	Thr	Ala	Thr	Gly	Phe	Gln	Gln	Cys	Ser	Leu	Ile	Asp	Gly
245					250					255				
Arg	Ser	Val	Thr	Pro	Leu	Gln	Ala	Ser	Gly	Gly	Leu	Val	Leu	Leu
260					265					270				
Glu	Glu	Met	Leu	Ala	Leu	Gly	Asn	Asn	His	Phe	Ile	Gly	Phe	Val
275					280					285				
Asn	Asp	Ser	Val	Thr	Lys	Ser	Ile	Val	Ala	Leu	Arg	Leu	Thr	Leu
290					295					300				
Val	Val	Lys	Val	Ser	Thr	Cys	Val	Pro	Gly	Glu	Ser	His	Ala	Asn
305					310					315				
Asp	Leu	Glu	Cys	Ser	Gly	Lys	Gly	Lys	Cys	Thr	Thr	Lys	Pro	Ser
320					325					330				
Glu	Ala	Thr	Phe	Ser	Cys	Thr	Cys	Glu	Glu	Gln	Tyr	Val	Gly	Thr
335					340					345				
Phe	Cys	Glu	Glu	Tyr	Asp	Ala	Cys	Gln	Arg	Lys	Pro	Cys	Gln	Asn
350					355					360				
Asn	Ala	Ser	Cys	Ile	Asp	Ala	Asn	Glu	Lys	Gln	Asp	Gly	Ser	Asn
365					370					375				
Phe	Thr	Cys	Val	Cys	Leu	Pro	Gly	Tyr	Thr	Gly	Glu	Leu	Cys	Gln
380					385					390				
Ser	Lys	Ile	Asp	Tyr	Cys	Ile	Leu	Asp	Pro	Cys	Arg	Asn	Gly	Ala
395					400					405				

SECRET

695

700

705

Ser Arg Pro Ala Met Tyr Asp Val Ser Pro Ile Ala Tyr Glu Asp
710 715 720

Tyr Ser Pro Asp Asp Lys Pro Leu Val Thr Leu Ile Lys Thr Lys
725 730 735

Asp Leu

<210> 16

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 16

tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 17

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 17

caggaaacag ctatgaccac ctgcacacct gcaaatecat t 41

<210> 18

<211> 508

<212> DNA

<213> Homo Sapien

<400> 18

ctctggaagg tcacggccac aggattccaa cagtgtctcc tcatagatgg 50

acgaaagtgt gacccccctt tcaggctttc agggggactg gtcctcctgg 100

aggagatgct cgccttgagg aataatcact ttattgggtt tgtgaatgat 150

tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggatgaagg 200

cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagggttcag 250

gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttctgtacc 300

tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350

gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400

aagatgggag caatttcacc tgtgtttgcc ttctgggtta tactggagag 450

ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500

[illegible]

```
<400> 19
ctctggaagg tcacggccac aggattccaa cagtgtctcc tcatagatgg 50
acgaaagtgt gacccccctt tcaggctttc aggggggactg gtcctcctgg 100
aggagatgct cgccttgggg aataatcact ttattggttt tgtgaatgat 150
tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggtgaaggt 200
cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagtgttcag 250
gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttctgtacc 300
tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350
gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400
aagatgggag caatttcacc tgtgtttgcc ttctgggtta tactggagag 450
ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500
```

```
<210> 20
<211> 23
<212> DNA
<213> Artificial Sequence
```

```
<400> 20
ctctggaagg tcacggccac agg 23
```

<220>
<223> Synthetic oligonucleotide probe

```
<210> 22
<211> 69
<212> DNA
<213> Artificial Sequence
```

20

[illegible]

gctttgccaa ccgaactga 69

```
<210> 23
<211> 1520
<212> DNA
<213> Homo Sapien
```

<400> 23
gctgagctctg ctgctcctgc tgctgctgct ccagcctgta acctgtgcct 50
acaccacgcc agggcccccc agagccctca ccacgctggg cggccccaga 100
gcccacacca tgccggggcac ctacgctccc tcgaccacac tcagtagtcc 150
cagcaccagc ggcttgcaag agcaggcacg ggccctgatg cgggacttcc 200
cgctcgtgga cggccacaac gacctgcccc tggctctaag gcaggtttac 250
cagaaagggc tacaggatgt taacctgcgc aatttcagct acggccagac 300
cagcctggac aggcttagag atggcctcgt gggcgcccag ttctggtcag 350
cctatgtgcc atgccagacc caggaccggg atgcctgcg cctcacctg 400
gagcagattg acctatacgc ccgcattgtg gcctcctatt ctgagctgga 450
gcttgtgacc tcggctaaag ctctgaacga cactcagaaa ttggcctgcc 500
tcatcggtgt agaggggtggc cactcgctgg acaatagcct ctccatctta 550
cgtaccttct acatgctggg agtgcgctac ctgacgctca cccacacctg 600
caacacaccc tgggcagaga gctccgctaa gggcgccac tccttctaca 650
acaacatcag cgggctgact gactttggtg agaaggtggt ggcagaaatg 700
aaccgcctgg gcatgatggt agacttatcc catgtctcag atgctgtggc 750
acggcgggcc ctggaagtgt cacaggcacc tgtgatcttc tcccactcgg 800
ctgcccgggg tgtgtgcaac agtgctcgga atgttcctga tgacatcctg 850
cagcttctga agaagaacgg tggcgctcgt atgggtgtctt tgtccatggg 900
agtaatacag tgcaacccat cagccaatgt gtccactgtg gcagatcact 950
tcgaccacat caaggctgtc attggatcca agttcatcgg gattggtgga 1000
gattatgatg gggccggcaa attccctcag gggctggaag acgtgtccac 1050
ataccgggtc ctgatagagg agttgctgag tcgtggctgg agtgaggaag 1100
agcttcaggg tgtccttcgt ggaaacctgc tgcgggtctt cagacaagtg 1150

gaaaagggtac aggaagaaaa caaatggcaa agccccttgg aggacaagtt 1200
 cccggatgag cagctgagca gttcctgcca ctccgacctc tcacgtctgc 1250
 gtcagagaca gagtctgact tcaggccagg aactcactga gattcccata 1300
 cactggacag ccaagttacc agccaagtgg tcagtctcag agtcctcccc 1350
 ccacatggcc ccagtccttg cagttgtggc caccttccca gtccttattc 1400
 tgtggctctg atgaccagc tagtcctgcc agatgtcact gtagcaagcc 1450
 acagacaccc cacaagttc ccctgttgtg caggcacaaa tatttctga 1500
 aataaatggt ttggacatag 1520

<210> 24
 <211> 433
 <212> PRT
 <213> Homo Sapien

<400> 24
 Met Pro Gly Thr Tyr Ala Pro Ser Thr Thr Leu Ser Ser Pro Ser
 1 5 10 15
 Thr Gln Gly Leu Gln Glu Gln Ala Arg Ala Leu Met Arg Asp Phe
 20 25 30
 Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln
 35 40 45
 Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser
 50 55 60
 Tyr Gly Gln Thr Ser Leu Asp Arg Leu Arg Asp Gly Leu Val Gly
 65 70 75
 Ala Gln Phe Trp Ser Ala Tyr Val Pro Cys Gln Thr Gln Asp Arg
 80 85 90
 Asp Ala Leu Arg Leu Thr Leu Glu Gln Ile Asp Leu Ile Arg Arg
 95 100 105
 Met Cys Ala Ser Tyr Ser Glu Leu Glu Leu Val Thr Ser Ala Lys
 110 115 120
 Ala Leu Asn Asp Thr Gln Lys Leu Ala Cys Leu Ile Gly Val Glu
 125 130 135
 Gly Gly His Ser Leu Asp Asn Ser Leu Ser Ile Leu Arg Thr Phe
 140 145 150
 Tyr Met Leu Gly Val Arg Tyr Leu Thr Leu Thr His Thr Cys Asn
 155 160 165
 Thr Pro Trp Ala Glu Ser Ser Ala Lys Gly Val His Ser Phe Tyr
 170 175 180

0944396-083101

Asn Asn Ile Ser Gly Leu Thr Asp Phe Gly Glu Lys Val Val Ala	185	190	195
Glu Met Asn Arg Leu Gly Met Met Val Asp Leu Ser His Val Ser	200	205	210
Asp Ala Val Ala Arg Arg Ala Leu Glu Val Ser Gln Ala Pro Val	215	220	225
Ile Phe Ser His Ser Ala Ala Arg Gly Val Cys Asn Ser Ala Arg	230	235	240
Asn Val Pro Asp Asp Ile Leu Gln Leu Leu Lys Lys Asn Gly Gly	245	250	255
Val Val Met Val Ser Leu Ser Met Gly Val Ile Gln Cys Asn Pro	260	265	270
Ser Ala Asn Val Ser Thr Val Ala Asp His Phe Asp His Ile Lys	275	280	285
Ala Val Ile Gly Ser Lys Phe Ile Gly Ile Gly Gly Asp Tyr Asp	290	295	300
Gly Ala Gly Lys Phe Pro Gln Gly Leu Glu Asp Val Ser Thr Tyr	305	310	315
Pro Val Leu Ile Glu Glu Leu Leu Ser Arg Gly Trp Ser Glu Glu	320	325	330
Glu Leu Gln Gly Val Leu Arg Gly Asn Leu Leu Arg Val Phe Arg	335	340	345
Gln Val Glu Lys Val Gln Glu Glu Asn Lys Trp Gln Ser Pro Leu	350	355	360
Glu Asp Lys Phe Pro Asp Glu Gln Leu Ser Ser Ser Cys His Ser	365	370	375
Asp Leu Ser Arg Leu Arg Gln Arg Gln Ser Leu Thr Ser Gly Gln	380	385	390
Glu Leu Thr Glu Ile Pro Ile His Trp Thr Ala Lys Leu Pro Ala	395	400	405
Lys Trp Ser Val Ser Glu Ser Ser Pro His Met Ala Pro Val Leu	410	415	420
Ala Val Val Ala Thr Phe Pro Val Leu Ile Leu Trp Leu	425	430	

<210> 25
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 25
agttctggtc agcctatgtg cc 22

<210> 26
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
cgtgatggtg tctttgtcca tggg 24

<210> 27
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 27
ctccaccaat cccgatgaac ttgg 24

<210> 28
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 28
gagcagattg acctcatagc ccgcattgtg gcctcctatt ctgagctgga 50

<210> 29
<211> 1416
<212> DNA
<213> Homo Sapien

<400> 29
aaaacctata aatattccgg attattcata ccgtcccacc atcgggcgcg 50
gatccgcggc cgcaattct aaaccaacat gccgggcacc tacgtccct 100
cgaccacact cagtagtccc agcaccacagg gcctgcaaga gcaggcacgg 150
gccctgatgc gggacttccc gctcgtggac ggccacaacg acctgccct 200
ggctctaagg caggtttacc agaaagggt acaggatgtt aacctgcgca 250
atttcagcta cgccagacc agcctggaca ggcttagaga tggcctcgtg 300
ggcgcccagt tctggtcagc ctatgtgcc a tgcagaccc aggaccggga 350
tgccctgcgc ctcaccctgg agcagattga cctcatagc cgcatgtgtg 400

094435-083101
FOTEB0-95B4660

0994436-033101

cctcctattc tgagctggag cttgtgacct cggctaaagc tctgaacgac 450
 actcagaaat tggcctgcct catcgggtgta gaggggtggcc actcgtctgga 500
 caatagcctc tccatcttac gtaccttcta catgctggga gtgcgctacc 550
 tgacgctcac ccacacctgc aacacaccct gggcagagag ctccgctaag 600
 ggcgtccact ccttctacaa caacatcagc gggctgactg acttttgtga 650
 gaagggtggtg gcagaaatga accgcctggg catgatggta gacttatccc 700
 atgtctcaga tgctgtggca cggcgggccc tggaagtgtc acaggcacct 750
 gtgatcttct cccactcggc tgcccggggt gtgtgcaaca gtgctcggaa 800
 tgttctgat gacatcctgc agcttctgaa gaagaacggg ggcgtcgtga 850
 tgggtgtcttt gtccatggga gtaatacagt gcaaccatc agccaatgtg 900
 tccactgtgg cagatcactt cgaccacatc aaggctgtca ttggatccaa 950
 gttcatcggg attggtggag attatgatgg ggccggcaaa ttcctcagg 1000
 ggctggaaga cgtgtccaca taccgggtcc tgatagagga gttgctgagt 1050
 cgtggctgga gtgaggaaga gcttcagggt gtccttcgtg gaaacctgct 1100
 gcgggtcttc agacaagtgg aaaaggtaca ggaagaaaac aaatggcaaa 1150
 gcccttgga ggacaagttc ccgatgagc agctgagcag ttctgccac 1200
 tccgacctct cacgtctgcg tcagagacag agtctgactt caggccagga 1250
 actcactgag attcccatac actggacagc caagttacca gccaaagtgg 1300
 cagtctcaga gtctccccc caccctgaca aaactcacac atgcccaccg 1350
 tgcccagcac ctgaactcct ggggggaccg tcagtcttcc tcttcccccc 1400
 aaaaccaag gacacc 1416

<210> 30
 <211> 446
 <212> PRT
 <213> Homo Sapien

<400> 30
 Met Pro Gly Thr Tyr Ala Pro Ser Thr Thr Leu Ser Ser Pro Ser
 1 5 10 15
 Thr Gln Gly Leu Gln Glu Gln Ala Arg Ala Leu Met Arg Asp Phe
 20 25 30
 Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln
 35 40 45
 Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser

0044856-03401

	50	55	60
Tyr Gly Gln Thr Ser Leu Asp Arg Leu Arg Asp Gly Leu Val Gly	65	70	75
Ala Gln Phe Trp Ser Ala Tyr Val Pro Cys Gln Thr Gln Asp Arg	80	85	90
Asp Ala Leu Arg Leu Thr Leu Glu Gln Ile Asp Leu Ile Arg Arg	95	100	105
Met Cys Ala Ser Tyr Ser Glu Leu Glu Leu Val Thr Ser Ala Lys	110	115	120
Ala Leu Asn Asp Thr Gln Lys Leu Ala Cys Leu Ile Gly Val Glu	125	130	135
Gly Gly His Ser Leu Asp Asn Ser Leu Ser Ile Leu Arg Thr Phe	140	145	150
Tyr Met Leu Gly Val Arg Tyr Leu Thr Leu Thr His Thr Cys Asn	155	160	165
Thr Pro Trp Ala Glu Ser Ser Ala Lys Gly Val His Ser Phe Tyr	170	175	180
Asn Asn Ile Ser Gly Leu Thr Asp Phe Gly Glu Lys Val Val Ala	185	190	195
Glu Met Asn Arg Leu Gly Met Met Val Asp Leu Ser His Val Ser	200	205	210
Asp Ala Val Ala Arg Arg Ala Leu Glu Val Ser Gln Ala Pro Val	215	220	225
Ile Phe Ser His Ser Ala Ala Arg Gly Val Cys Asn Ser Ala Arg	230	235	240
Asn Val Pro Asp Asp Ile Leu Gln Leu Leu Lys Lys Asn Gly Gly	245	250	255
Val Val Met Val Ser Leu Ser Met Gly Val Ile Gln Cys Asn Pro	260	265	270
Ser Ala Asn Val Ser Thr Val Ala Asp His Phe Asp His Ile Lys	275	280	285
Ala Val Ile Gly Ser Lys Phe Ile Gly Ile Gly Gly Asp Tyr Asp	290	295	300
Gly Ala Gly Lys Phe Pro Gln Gly Leu Glu Asp Val Ser Thr Tyr	305	310	315
Pro Val Leu Ile Glu Glu Leu Leu Ser Arg Gly Trp Ser Glu Glu	320	325	330
Glu Leu Gln Gly Val Leu Arg Gly Asn Leu Leu Arg Val Phe Arg	335	340	345

Gln Val Glu Lys	Val Gln Glu Glu Asn	Lys Trp Gln Ser Pro	Leu
350		355	360
Glu Asp Lys Phe	Pro Asp Glu Gln Leu	Ser Ser Ser Cys His	Ser
365		370	375
Asp Leu Ser Arg	Leu Arg Gln Arg Gln	Ser Leu Thr Ser Gly	Gln
380		385	390
Glu Leu Thr Glu	Ile Pro Ile His Trp	Thr Ala Lys Leu Pro	Ala
395		400	405
Lys Trp Ser Val	Ser Glu Ser Ser Pro	His Pro Asp Lys Thr	His
410		415	420
Thr Cys Pro Pro	Cys Pro Ala Pro Glu	Leu Leu Gly Gly Pro	Ser
425		430	435
Val Phe Leu Phe	Pro Pro Lys Pro Lys	Asp Thr	
440		445	

<210> 31
 <211> 1790
 <212> DNA
 <213> Homo Sapien

<400> 31
 cgcccagcga cgtgcgggcg gcctggcccg cgccctcccg cgcccggcct 50
 gcgtcccgcg ccctgcgcca ccgccgccga gccgcagccc gccgcgcgcc 100
 cccggcagcg ccggcccat gcccgccggc cgccggggcc ccgccgcca 150
 atccgcgcgg cgccgcgcgc cgttgctgcc cctgctgctg ctgctctgcg 200
 tctcgggggc gccgcgagcc ggatcaggag cccacacagc tgtgatcagt 250
 ccccaggatc ccacgttct catcggtcc tccctgctgg ccacctgctc 300
 agtgcacgga gaccaccag gagccaccgc cgagggcctc tactggaccc 350
 tcaacgggcg ccgcctgcc cctgagctct cccgtgtact caacgcctcc 400
 accttggtctc tggccctggc caacctcaat ggggccaggc agcggtcggg 450
 ggacaacctc gtgtgccacg cccgtgacgg cagcatcctg gctggctcct 500
 gcctctatgt tggcctgcc ccagagaaac ccgtcaacat cagctgctgg 550
 tccaagaaca tgaaggactt gacctgccgc tggacgccag gggccacgg 600
 ggagaccttc ctccacacca actactccct caagtacaag cttaggtggg 650
 atggccagga caacacatgt gaggagtacc acacagtggg gcccactcc 700
 tgccacatcc ccaaggacct ggctctcttt acgccctatg agatctgggt 750
 ggaggccacc aaccgcctgg gctctgcccg ctccgatgta ctcacgtgg 800

094436.083101

SECRET

```

<400> 32
Met  Pro  Ala  Gly  Arg  Arg  Gly  Pro  Ala  Ala  Gln  Ser  Ala  Arg  Arg
   1                                10                      15

Pro  Pro  Pro  Leu  Leu  Pro  Leu  Leu  Leu  Leu  Leu  Cys  Val  Leu  Gly
   20                                25                      30

Ala  Pro  Arg  Ala  Gly  Ser  Gly  Ala  His  Thr  Ala  Val  Ile  Ser  Pro
   35                                40                      45

Gln  Asp  Pro  Thr  Leu  Leu  Ile  Gly  Ser  Ser  Leu  Leu  Ala  Thr  Cys
   50                                55                      60

```

FOIEBO" 9584660

Ser Val His Gly Asp Pro Pro Gly Ala Thr Ala Glu Gly Leu Tyr	65	70	75
Trp Thr Leu Asn Gly Arg Arg Leu Pro Pro Glu Leu Ser Arg Val	80	85	90
Leu Asn Ala Ser Thr Leu Ala Leu Ala Leu Ala Asn Leu Asn Gly	95	100	105
Ser Arg Gln Arg Ser Gly Asp Asn Leu Val Cys His Ala Arg Asp	110	115	120
Gly Ser Ile Leu Ala Gly Ser Cys Leu Tyr Val Gly Leu Pro Pro	125	130	135
Glu Lys Pro Val Asn Ile Ser Cys Trp Ser Lys Asn Met Lys Asp	140	145	150
Leu Thr Cys Arg Trp Thr Pro Gly Ala His Gly Glu Thr Phe Leu	155	160	165
His Thr Asn Tyr Ser Leu Lys Tyr Lys Leu Arg Trp Tyr Gly Gln	170	175	180
Asp Asn Thr Cys Glu Glu Tyr His Thr Val Gly Pro His Ser Cys	185	190	195
His Ile Pro Lys Asp Leu Ala Leu Phe Thr Pro Tyr Glu Ile Trp	200	205	210
Val Glu Ala Thr Asn Arg Leu Gly Ser Ala Arg Ser Asp Val Leu	215	220	225
Thr Leu Asp Ile Leu Asp Val Val Thr Thr Asp Pro Pro Pro Asp	230	235	240
Val His Val Ser Arg Val Gly Gly Leu Glu Asp Gln Leu Ser Val	245	250	255
Arg Trp Val Ser Pro Pro Ala Leu Lys Asp Phe Leu Phe Gln Ala	260	265	270
Lys Tyr Gln Ile Arg Tyr Arg Val Glu Asp Ser Val Asp Trp Lys	275	280	285
Val Val Asp Asp Val Ser Asn Gln Thr Ser Cys Arg Leu Ala Gly	290	295	300
Leu Lys Pro Gly Thr Val Tyr Phe Val Gln Val Arg Cys Asn Pro	305	310	315
Phe Gly Ile Tyr Gly Ser Lys Lys Ala Gly Ile Trp Ser Glu Trp	320	325	330
Ser His Pro Thr Ala Ala Ser Thr Pro Arg Ser Glu Arg Pro Gly	335	340	345
Pro Gly Gly Gly Ala Cys Glu Pro Arg Gly Gly Glu Pro Ser Ser			

350

355

360

Gly Pro Val Arg Arg Glu Leu Lys Gln Phe Leu Gly Trp Leu Lys
 365 370 375

Lys His Ala Tyr Cys Ser Asn Leu Ser Phe Arg Leu Tyr Asp Gln
 380 385 390

Trp Arg Ala Trp Met Gln Lys Ser His Lys Thr Arg Asn Gln Asp
 395 400 405

Glu Gly Ile Leu Pro Ser Gly Arg Arg Gly Thr Ala Arg Gly Pro
 410 415 420

Ala Arg

<210> 33

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 33

cccgcccgac gtgcacgtga gcc 23

<210> 34

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 34

tgagccagcc caggaactgc ttg 23

<210> 35

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 35

caagtgcgct gcaaccctt tggcatctat ggctccaaga aagccgggat 50

<210> 36

<211> 1771

<212> DNA

<213> Homo Sapien

<400> 36

cccacgcgtc cgctggtggt agatcgagca accctctaaa agcagtttag 50

00044895-003101

agtggtaaaa aaaaaaaaaa acacacccaaa cgctcgcagc cacaaaaggg 100
atgaaatttc ttctggacat cctcctgctt ctcccgttac tgategtctg 150
ctccctagag tccttcgtga agctttttat tcctaagagg agaaaatcag 200
tcaccggcga aatcgtgctg attacaggag ctgggcatgg aattgggaga 250
ctgactgcct atgaatttgc taaacttaaa agcaagctgg ttctctggga 300
tataaataag catggactgg aggaaacagc tgccaaatgc aagggactgg 350
gtgccaaggt tcataccttt gtggtagact gcagcaaccg agaagatatt 400
tacagctctg caaagaaggt gaaggcagaa attggagatg ttagtatatt 450
agtaaataat gctggtgtag tctatacatc agatttgttt gctacacaag 500
atcctcagat tgaaaagact tttgaagtta atgtacttgc acatttctgg 550
actacaaaagg catttcttcc tgcaatgacg aagaataacc atggccatat 600
tgtcactgtg gcttcggcag ctggacatgt ctcggtcccc ttcttactgg 650
cttactgttc aagcaagttt gctgctgttg gatttcataa aactttgaca 700
gatgaactgg ctgccttaca aataactgga gtcaaaacaa catgtctgtg 750
tcctaatttc gtaaacactg gttcatcaa aaatccaagt acaagtttgg 800
gaccactct ggaacctgag gaagtggtaa acaggctgat gcatgggatt 850
ctgactgagc agaagatgat ttttattcca tcttctatag cttttttaac 900
aacattggaa aggatccttc ctgagcgttt cctggcagtt ttaaaacgaa 950
aaatcagtgt taagtttgat gcagttattg gatataaaat gaaagcgcaa 1000
taagcaccta gttttctgaa aactgattta ccaggtttag gttgatgtca 1050
tctaatagtg ccagaatttt aatgtttgaa cttctgtttt ttctaattat 1100
ccccatttct tcaatatcat ttttgaggct ttggcagtct tcatttacta 1150
ccacttgttc tttagccaaa agctgattac atatgatata aacagagaaa 1200
tacctttaga ggtgacttta aggaaaatga agaaaaagaa ccaaatgac 1250
tttattaaaa taatttccaa gattatttgt ggctcacctg aaggctttgc 1300
aaaatttgta ccataaccgt ttattttaaca tatattttta tttttgattg 1350
cacttaaatt ttgtataatt tgtgtttctt tttctgttct acataaaaac 1400
agaaacttca agctctctaa ataaaatgaa ggactatata tagtggtatt 1450
tcacaatgaa tatcatgaac tctcaatggg taggtttcat cctaccatt 1500

200	205	210
Val Lys Thr Thr Cys Leu Cys Pro Asn Phe	Val Asn Thr Gly Phe	
215	220	225
Ile Lys Asn Pro Ser Thr Ser Leu Gly	Pro Thr Leu Glu Pro Glu	
230	235	240
Glu Val Val Asn Arg Leu Met His Gly	Ile Leu Thr Glu Gln Lys	
245	250	255
Met Ile Phe Ile Pro Ser Ser Ile Ala	Phe Leu Thr Thr Leu Glu	
260	265	270
Arg Ile Leu Pro Glu Arg Phe Leu Ala	Val Leu Lys Arg Lys Ile	
275	280	285
Ser Val Lys Phe Asp Ala Val Ile Gly	Tyr Lys Met Lys Ala Gln	
290	295	300

<210> 38
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 38
 ggtgaaggca gaaattggag atg 23

<210> 39
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 39
 atcccatgca tcagcctgtt tacc 24

<210> 40
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 40
 gctggtgtag tctatacatc agatttgttt gctacacaag atcctcag 48

<210> 41
 <211> 1377
 <212> DNA
 <213> Homo Sapien

<400> 41

gactagttct cttggagtct gggaggagga aagcggagcc ggcagggagc 50
gaaccaggac tggggtgacg gcagggcagg gggcgcctgg ccggggagaa 100
gcgcgggggc tggagcacca ccaactggag ggtccggagt agcgagcgcc 150
ccgaaggagg ccatcgggga gccgggaggg gggactgcga gaggaccccg 200
gcgtccgggc tcccgggtgcc agcgctatga ggccactcct cgtcctgctg 250
ctcctggggc tggcgggcgg ctgccccca ctggacgaca acaagatccc 300
cagcctctgc ccggggcacc ccggccttcc aggcacgccg ggccaccatg 350
gcagccaggg cttgccgggc cgcgatggcc gcgacggccg cgacggcgcg 400
cccggggctc cgggagagaa aggcgagggc gggaggccgg gactgccggg 450
acctcgaggg gaccccgggc cgcgaggaga ggcgggaccc gcggggccca 500
ccgggcctgc cggggagtgc tcggtgctc cgcgatecgc cttcagcgcc 550
aagcgtccg agagccgggt gcctccgccg tctgacgcac ccttgccctt 600
cgaccgcgtg ctgggtgaacg agcagggaca ttacgacgcc gtcaccggca 650
agttcacctg ccagggtgcct ggggtctact acttcgcgt ccatgccacc 700
gtctaccggg ccagcctgca gtttgatctg gtgaagaatg gcgaatccat 750
tgctctttc ttccagtttt tcggggggtg gcccagcca gcctcgtct 800
cggggggggc catggtgagg ctggagcctg aggaccaagt gtgggtgcag 850
gtgggtgtgg gtgactacat tggcatctat gccagcatca agacagacag 900
caccttctcc ggatttctgg tgtactccga ctggcacagc tccccagtct 950
ttgcttagtg cccactgcaa agtgagctca tgctctcact cctagaagga 1000
gggtgtgagg ctgacaacca ggtcatccag gagggctggc ccccctggaa 1050
tattgtgaat gactagggag gtggggtaga gcactctccg tctgctgct 1100
ggcaaggaat gggaacagtg gctgtctgcg atcaggtctg gcagcatggg 1150
gcagtggctg gatttctgcc caagaccaga ggagtgtgct gtgctggcaa 1200
gtgtaagtcc ccagttgct ctgggtccagg agcccacggg ggggtgctct 1250
cttctgggtc ctctgcttct ctggatcctc cccaccccct cctgctctg 1300
gggccggccc ttttctcaga gatcactcaa taaacctaag aaccctcata 1350
aaaaaaaaa aaaaaaaaaa aaaaaaa 1377

<210> 42

<211> 243
 <212> PRT
 <213> Homo Sapien

<400> 42

Met	Arg	Pro	Leu	Leu	Val	Leu	Leu	Leu	Leu	Gly	Leu	Ala	Ala	Gly
1				5					10					15
Ser	Pro	Pro	Leu	Asp	Asp	Asn	Lys	Ile	Pro	Ser	Leu	Cys	Pro	Gly
				20					25					30
His	Pro	Gly	Leu	Pro	Gly	Thr	Pro	Gly	His	His	Gly	Ser	Gln	Gly
				35					40					45
Leu	Pro	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Ala	Pro	Gly
				50					55					60
Ala	Pro	Gly	Glu	Lys	Gly	Glu	Gly	Gly	Arg	Pro	Gly	Leu	Pro	Gly
				65					70					75
Pro	Arg	Gly	Asp	Pro	Gly	Pro	Arg	Gly	Glu	Ala	Gly	Pro	Ala	Gly
				80					85					90
Pro	Thr	Gly	Pro	Ala	Gly	Glu	Cys	Ser	Val	Pro	Pro	Arg	Ser	Ala
				95					100					105
Phe	Ser	Ala	Lys	Arg	Ser	Glu	Ser	Arg	Val	Pro	Pro	Pro	Ser	Asp
				110					115					120
Ala	Pro	Leu	Pro	Phe	Asp	Arg	Val	Leu	Val	Asn	Glu	Gln	Gly	His
				125					130					135
Tyr	Asp	Ala	Val	Thr	Gly	Lys	Phe	Thr	Cys	Gln	Val	Pro	Gly	Val
				140					145					150
Tyr	Tyr	Phe	Ala	Val	His	Ala	Thr	Val	Tyr	Arg	Ala	Ser	Leu	Gln
				155					160					165
Phe	Asp	Leu	Val	Lys	Asn	Gly	Glu	Ser	Ile	Ala	Ser	Phe	Phe	Gln
				170					175					180
Phe	Phe	Gly	Gly	Trp	Pro	Lys	Pro	Ala	Ser	Leu	Ser	Gly	Gly	Ala
				185					190					195
Met	Val	Arg	Leu	Glu	Pro	Glu	Asp	Gln	Val	Trp	Val	Gln	Val	Gly
				200					205					210
Val	Gly	Asp	Tyr	Ile	Gly	Ile	Tyr	Ala	Ser	Ile	Lys	Thr	Asp	Ser
				215					220					225
Thr	Phe	Ser	Gly	Phe	Leu	Val	Tyr	Ser	Asp	Trp	His	Ser	Ser	Pro
				230					235					240
Val	Phe	Ala												

<210> 43
 <211> 24

00944896.003101

SECRET

```
<210> 48
<211> 45
<212> DNA
<213> Artificial Sequence
```

<220>

<223> Synthetic oligonucleotide probe

<400> 48

ggagcaccac caactggagg gtccggagta gcgagcgccc cgaag 45

<210> 49

<211> 1876

<212> DNA

<213> Homo Sapien

<400> 49

ctcttttgtc caccagccca gcttgactcc tggagattgt gaatagctcc 50

atccagcctg agaaacaagc cgggtggctg agccaggctg tgcacggagc 100

acctgacggg cccaacagac ccatgctgca tccagagacc tcccctggcc 150

gggggcatct cctggctgtg ctctggccc tcttggcac cacctgggca 200

gaggtgtggc caccagct gcaggagcag gctccgatgg ccggagccct 250

gaacaggaag gagagtttct tgctcctctc cctgcacaac cgctgcgca 300

gctgggtcca gcccctgcg gctgacatgc ggaggctgga ctggagtgc 350

agcctggccc aactggctca agccagggca gccctctgtg gaatcccaac 400

cccagcctg gcatccggcc tgtggcgcac cctgcaagtg ggctggaaca 450

tgcagctgct gcccgcgggc ttggcgctct ttgttgaagt ggtcagccta 500

tggtttgag aggggcagcg gtacagccac gcggcaggag agtgtgctcg 550

caacgccacc tgcaccact acacgcagct cgtgtggggc acctcaagcc 600

agctgggctg tgggcggcac ctgtgctctg caggccagac agcgatagaa 650

gcctttgtct gtgcctactc ccccgaggc aactgggagg tcaacgggaa 700

gacaatcacc ccctataaga aggggtgctg gtgttcgctc tgcacagcca 750

gtgtctcagg ctgcttcaaa gcctgggacc atgcaggggg gctctgtgag 800

gtccccagga atccttgctg catgagctgc cagaaccatg gacgtctcaa 850

catcagcacc tgccactgcc actgtccccc tggctacacg ggcagatact 900

gccaaagtgc gtgcagcctg cagtgtgtgc acggccggtt ccgggaggag 950

gagtgtcgt gcgtctgtga catcggtac gggggagccc agtgtgccac 1000

caaggtgcat ttcccttcc acacctgtga cctgaggatc gacggagact 1050

gcttcattgt gtcttcagag gcagacacct attacagagc caggatgaaa 1100

tgtcagagga aaggcggggg gctggcccag atcaagagcc agaaagtgc 1150

0994406-033101

ggacatcctc gccttctatc tgggccgcct ggagaccacc aacgaggtga 1200
 ctgacagtga cttcgagacc aggaacttct ggatcgggct cacctacaag 1250
 accgccaagg actccttccg ctggggccaca ggggagcacc aggccttcac 1300
 cagttttgcc tttgggcagc ctgacaacca cgggctggtg tggctgagtg 1350
 ctgccatggg gtttggaac tgcgtggagc tgcaggcttc agctgccttc 1400
 aactggaacg accagcgtg caaaaccga aaccgttaca tctgccagtt 1450
 tgcccaggag cacatctccc ggtggggccc agggctctga ggctgacca 1500
 catggctccc tcgctgccc tgggagcacc ggctctgctt acctgtctgc 1550
 ccacctgtct ggaacaaggg ccagggttaag accacatgcc tcatgtccaa 1600
 agaggtctca gaccttgac aatgccagaa gttgggcaga gagaggcagg 1650
 gaggccagtg agggccaggg agtgagtgtt agaagaagct ggggcccttc 1700
 gcctgctttt gattgggaag atgggcttca attagatggc gaaggagagg 1750
 acaccgccag tggtcacaaa aggtgtctct cttccacctg gccagaccc 1800
 tgtggggcag cggagcttcc ctgtggcatg aacccacgg ggtattaaat 1850
 tatgaatcag ctgaaaaaaaa aaaaaa 1876

<210> 50
 <211> 455
 <212> PRT
 <213> Homo Sapien

<400> 50
 Met Leu His Pro Glu Thr Ser Pro Gly Arg Gly His Leu Leu Ala
 1 5 10 15
 Val Leu Leu Ala Leu Leu Gly Thr Thr Trp Ala Glu Val Trp Pro
 20 25 30
 Pro Gln Leu Gln Glu Gln Ala Pro Met Ala Gly Ala Leu Asn Arg
 35 40 45
 Lys Glu Ser Phe Leu Leu Leu Ser Leu His Asn Arg Leu Arg Ser
 50 55 60
 Trp Val Gln Pro Pro Ala Ala Asp Met Arg Arg Leu Asp Trp Ser
 65 70 75
 Asp Ser Leu Ala Gln Leu Ala Gln Ala Arg Ala Ala Leu Cys Gly
 80 85 90
 Ile Pro Thr Pro Ser Leu Ala Ser Gly Leu Trp Arg Thr Leu Gln
 95 100 105
 Val Gly Trp Asn Met Gln Leu Leu Pro Ala Gly Leu Ala Ser Phe

0034496-003101

110	115	120
Val Glu Val Val Ser Leu Trp Phe Ala	Glu Gly Gln Arg Tyr Ser	
125	130	135
His Ala Ala Gly Glu Cys Ala Arg Asn	Ala Thr Cys Thr His Tyr	
140	145	150
Thr Gln Leu Val Trp Ala Thr Ser Ser	Gln Leu Gly Cys Gly Arg	
155	160	165
His Leu Cys Ser Ala Gly Gln Thr Ala	Ile Glu Ala Phe Val Cys	
170	175	180
Ala Tyr Ser Pro Gly Gly Asn Trp Glu	Val Asn Gly Lys Thr Ile	
185	190	195
Ile Pro Tyr Lys Lys Gly Ala Trp Cys	Ser Leu Cys Thr Ala Ser	
200	205	210
Val Ser Gly Cys Phe Lys Ala Trp Asp	His Ala Gly Gly Leu Cys	
215	220	225
Glu Val Pro Arg Asn Pro Cys Arg Met	Ser Cys Gln Asn His Gly	
230	235	240
Arg Leu Asn Ile Ser Thr Cys His Cys	His Cys Pro Pro Gly Tyr	
245	250	255
Thr Gly Arg Tyr Cys Gln Val Arg Cys	Ser Leu Gln Cys Val His	
260	265	270
Gly Arg Phe Arg Glu Glu Glu Cys Ser	Cys Val Cys Asp Ile Gly	
275	280	285
Tyr Gly Gly Ala Gln Cys Ala Thr Lys	Val His Phe Pro Phe His	
290	295	300
Thr Cys Asp Leu Arg Ile Asp Gly Asp	Cys Phe Met Val Ser Ser	
305	310	315
Glu Ala Asp Thr Tyr Tyr Arg Ala Arg	Met Lys Cys Gln Arg Lys	
320	325	330
Gly Gly Val Leu Ala Gln Ile Lys Ser	Gln Lys Val Gln Asp Ile	
335	340	345
Leu Ala Phe Tyr Leu Gly Arg Leu Glu	Thr Thr Asn Glu Val Thr	
350	355	360
Asp Ser Asp Phe Glu Thr Arg Asn Phe	Trp Ile Gly Leu Thr Tyr	
365	370	375
Lys Thr Ala Lys Asp Ser Phe Arg Trp	Ala Thr Gly Glu His Gln	
380	385	390
Ala Phe Thr Ser Phe Ala Phe Gly Gln	Pro Asp Asn His Gly Leu	
395	400	405

Val Trp Leu Ser Ala Ala Met Gly Phe Gly Asn Cys Val Glu Leu
410 415 420

Gln Ala Ser Ala Ala Phe Asn Trp Asn Asp Gln Arg Cys Lys Thr
425 430 435

Arg Asn Arg Tyr Ile Cys Gln Phe Ala Gln Glu His Ile Ser Arg
440 445 450

Trp Gly Pro Gly Ser
455

<210> 51
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 51
aggaacttct ggatcgggct cacc 24

<210> 52
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 52
gggtctgggc caggtggaag agag 24

<210> 53
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 53
gccaaggact ccttccgctg ggccacaggg gagcaccagg ccttc 45

<210> 54
<211> 2331
<212> DNA
<213> Homo Sapien

<400> 54
cggacgcgtg ggctgggcgc tgcaaagcgt gtcccgcggt gtccccgagc 50
gtcccgcgcc ctgcgccgc catgctcctg ctgctggggc tgtgctggg 100
gctgtccctg tgtgtggggt cgcaggaaga ggcgcagagc tggggccact 150
cttcggagca ggatggactc aggggtcccga ggcaagtcag actgttgcag 200

094439C-0634460

aggctgaaaa ccaaaccctt gatgacagaa ttctcagtga agtctacat 250
catttcccgt tatgccttca ctacggtttc ctgcagaatg ctgaacagag 300
cttctgaaga ccaggacatt gagttccaga tgcagattcc agctgcagct 350
ttcatcacca acttcactat gcttattgga gacaaggtgt atcagggcga 400
aattacagag agagaaaaga agagtgggtga tagggtaaaa gagaaaagga 450
ataaaaccac agaagaaaat ggagagaagg ggactgaaat attcagagct 500
tctgcagtga ttcccagcaa ggacaaagcc gcctttttcc tgagttatga 550
ggagcttctg cagaggcgcc tgggcaagta cgagcacagc atcagcgtgc 600
ggccccagca gctgtccggg aggtgagcg tggacgtgaa tctctggag 650
agcgcgggca tgcacccct ggaggtgctg ccgcttcaca acagcaggca 700
gaggggcagt gggcgcgggg aagatgattc tgggcctccc ccatctactg 750
tcattaacca aaatgaaaca ttgccaaca taatttttaa acctactgta 800
gtacaacaag ccaggattgc ccagaatgga attttgggag actttatcat 850
tagatatgac gtcaatagag aacagagcat tggggacatc caggttctaa 900
atggctattt tgtgcactac ttgctccta aagaccttc tcttttacc 950
aagaatgtgg tattegtgct tgacagcagt gcttctatgg tgggaaccaa 1000
actccggcag accaaggatg ccctcttcac aattctccat gacctccgac 1050
cccaggaccg tttcagtatc attggatttt ccaaccggat caaagtatgg 1100
aaggaccact tgatatcagt cactccagac agcatcaggg atgggaaagt 1150
gtacattcac catatgtcac cactggagg cacagacatc aacggggccc 1200
tgcagagggc catcaggctc ctcaacaagt acgtggcca cagtggcatt 1250
ggagaccgga gcgtgtccct categtcttc ctgacggatg ggaagcccac 1300
ggtcgggggag acgcacaccc tcaagatcct caacaacacc cgagaggccg 1350
cccgaggcca agtctgcac ttcaccattg gcatcggcaa cgacgtggac 1400
ttcaggctgc tggagaaact gtcgtggag aactgtggcc tcacacggcg 1450
cgtgcacgag gaggaggacg caggctcgca gctcatcggg ttctacgatg 1500
aaatcaggac ccgctcctc tctgacatcc gcatcgatta tccccccagc 1550
tcagtgggtgc aggccaccaa gacctgttc cccaactact tcaacggctc 1600
ggagatcatc attgcgggga agctgggtgga caggaagctg gatcacctgc 1650

0904489C-083101

Arg Val Lys Glu Lys Arg Asn Lys Thr	Thr Glu Glu Asn Gly Glu	125	130	135
Lys Gly Thr Glu Ile Phe Arg Ala Ser	Ala Val Ile Pro Ser Lys	140	145	150
Asp Lys Ala Ala Phe Phe Leu Ser Tyr	Glu Glu Leu Leu Gln Arg	155	160	165
Arg Leu Gly Lys Tyr Glu His Ser Ile	Ser Val Arg Pro Gln Gln	170	175	180
Leu Ser Gly Arg Leu Ser Val Asp Val	Asn Ile Leu Glu Ser Ala	185	190	195
Gly Ile Ala Ser Leu Glu Val Leu Pro	Leu His Asn Ser Arg Gln	200	205	210
Arg Gly Ser Gly Arg Gly Glu Asp Asp	Ser Gly Pro Pro Pro Ser	215	220	225
Thr Val Ile Asn Gln Asn Glu Thr Phe	Ala Asn Ile Ile Phe Lys	230	235	240
Pro Thr Val Val Gln Gln Ala Arg Ile	Ala Gln Asn Gly Ile Leu	245	250	255
Gly Asp Phe Ile Ile Arg Tyr Asp Val	Asn Arg Glu Gln Ser Ile	260	265	270
Gly Asp Ile Gln Val Leu Asn Gly Tyr	Phe Val His Tyr Phe Ala	275	280	285
Pro Lys Asp Leu Pro Pro Leu Pro Lys	Asn Val Val Phe Val Leu	290	295	300
Asp Ser Ser Ala Ser Met Val Gly Thr	Lys Leu Arg Gln Thr Lys	305	310	315
Asp Ala Leu Phe Thr Ile Leu His Asp	Leu Arg Pro Gln Asp Arg	320	325	330
Phe Ser Ile Ile Gly Phe Ser Asn Arg	Ile Lys Val Trp Lys Asp	335	340	345
His Leu Ile Ser Val Thr Pro Asp Ser	Ile Arg Asp Gly Lys Val	350	355	360
Tyr Ile His His Met Ser Pro Thr Gly	Gly Thr Asp Ile Asn Gly	365	370	375
Ala Leu Gln Arg Ala Ile Arg Leu Leu	Asn Lys Tyr Val Ala His	380	385	390
Ser Gly Ile Gly Asp Arg Ser Val Ser	Leu Ile Val Phe Leu Thr	395	400	405
Asp Gly Lys Pro Thr Val Gly Glu Thr	His Thr Leu Lys Ile Leu			

0994496-063101

410	415	420
Asn Asn Thr Arg Glu Ala Ala Arg Gly	Gln Val Cys Ile Phe Thr	
425	430	435
Ile Gly Ile Gly Asn Asp Val Asp Phe	Arg Leu Leu Glu Lys Leu	
440	445	450
Ser Leu Glu Asn Cys Gly Leu Thr Arg	Arg Val His Glu Glu Glu	
455	460	465
Asp Ala Gly Ser Gln Leu Ile Gly Phe	Tyr Asp Glu Ile Arg Thr	
470	475	480
Pro Leu Leu Ser Asp Ile Arg Ile Asp	Tyr Pro Pro Ser Ser Val	
485	490	495
Val Gln Ala Thr Lys Thr Leu Phe Pro	Asn Tyr Phe Asn Gly Ser	
500	505	510
Glu Ile Ile Ile Ala Gly Lys Leu Val	Asp Arg Lys Leu Asp His	
515	520	525
Leu His Val Glu Val Thr Ala Ser Asn	Ser Lys Lys Phe Ile Ile	
530	535	540
Leu Lys Thr Asp Val Pro Val Arg Pro	Gln Lys Ala Gly Lys Asp	
545	550	555
Val Thr Gly Ser Pro Arg Pro Gly Gly	Asp Gly Glu Gly Asp Thr	
560	565	570
Asn His Ile Glu Arg Leu Trp Ser Tyr	Leu Thr Thr Lys Glu Leu	
575	580	585
Leu Ser Ser Trp Leu Gln Ser Asp Asp	Glu Pro Glu Lys Glu Arg	
590	595	600
Leu Arg Gln Arg Ala Gln Ala Leu Ala	Val Ser Tyr Arg Phe Leu	
605	610	615
Thr Pro Phe Thr Ser Met Lys Leu Arg	Gly Pro Val Pro Arg Met	
620	625	630
Asp Gly Leu Glu Glu Ala His Gly Met	Ser Ala Ala Met Gly Pro	
635	640	645
Glu Pro Val Val Gln Ser Val Arg Gly	Ala Gly Thr Gln Pro Gly	
650	655	660
Pro Leu Leu Lys Lys Pro Asn Ser Val	Lys Lys Lys Gln Asn Lys	
665	670	675
Thr Lys Lys Arg His Gly Arg Asp Gly	Val Phe Pro Leu His His	
680	685	690
Leu Gly Ile Arg		

<210> 56
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 56
gtgggaacca aactccggca gacc 24

<210> 57
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 57
cacatcgagc gtctctgg 18

<210> 58
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 58
agccgctcct tctccggttc atcg 24

<210> 59
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 59
tggaaggacc acttgatatc agtcactcca gacagcatca gggatggg 48

<210> 60
<211> 1413
<212> DNA
<213> Homo Sapien

<400> 60
cggacgcgtg ggggtgcccga catggcgagt gtagtgctgc cgagcggatc 50
ccagtgtgctg gcggcagcgg cggcgggcggc gcctcccggg ctccggcttc 100
tgctgttgct cttctccgcc gcggcactga tccccacagg tgatgggcag 150
aatctgttta cgaaagacgt gacagtgatc gagggagagg ttgcgaccat 200

cagttgccaa gtcaataaga gtgacgactc tgtgattcag ctactgaatc 250
ccaacaggca gaccatttat ttcagggact tcaggccttt gaaggacagc 300
aggtttcagt tgctgaattt ttctagcagt gaactcaaag tatcattgac 350
aaacgtctca atttctgatg aaggaagata cttttgccag ctctataccg 400
atccccaca ggaaagttac accaccatca cagtctggt cccaccacgt 450
aatctgatga tcgatatcca gaaagacact gcggtggaag gtgaggagat 500
tgaagtcaac tgcactgcta tggccagcaa gccagccacg actatcaggt 550
ggttcaaagg gaacacagag ctaaaaggca aatcggagggt ggaagagtgg 600
tcagacatgt aactgtgac cagtcagctg atgctgaagg tgcacaagga 650
ggacgatggg gtcccagtga tctgccaggt ggagcaccct gcggtcactg 700
gaaacctgca gaccagcgg tatctagaag tacagtataa gcctcaagtg 750
cacattcaga tgacttatcc tctacaaggc ttaacccggg aaggggacgc 800
gcttgagtta acatgtgaag ccatcgggaa gcccagcct gtgatggtaa 850
cttgggtgag agtcgatgat gaaatgcctc aacacgccgt actgtctggg 900
cccaacctgt tcatcaataa cctaacaaca acagataatg gtacataccg 950
ctgtgaagct tcaaacatag tggggaaagc tctactcggat tatatgctgt 1000
atgtatacga tccccccaca actatccctc ctcccacaac aaccaccacc 1050
accaccacca ccaccaccac caccatcctt accatcatca cagattcccg 1100
agcaggtgaa gaaggctcga tcagggcagt ggatcatgcc gtgatcgggtg 1150
gcgtcgtggc ggtggtggtg ttcgccatgc tgtgcttgct catcattctg 1200
gggcgctatt ttgccagaca taaagggtaca tacttcactc atgaagccaa 1250
aggagccgat gacgcagcag acgcagacac agctataatc aatgcagaag 1300
gaggacagaa caactccgaa gaaaagaaag agtacttcat ctagatcagc 1350
ctttttgttt caatgaggtg tccaactggc cctattttaga tgataaagag 1400
acagtgatat tgg 1413

```
<210> 61
<211> 440
<212> PRT
<213> Homo Sapien
```

[illegible]

<400> 64
atcatcacag attcccgagc 20

<210> 65
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
ttcaatctcc tcaccttcca ccgc 24

<210> 66
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 66
atagctgtgt ctgcgtctgc tgcg 24

<210> 67
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 67
cgcggcactg atccccacag gtgatgggca gaatctgttt acgaaagacg 50

<210> 68
<211> 2555
<212> DNA
<213> Homo Sapien

<400> 68
ggggcgggtg gacgcggact cgaacgcagt tgcttcggga cccaggaccc 50
cctcggggccc gaccgcagcag gaaagactga ggccgcggcc tgccccgccc 100
ggctccctgc gccgcgcgcg cctcccgga cagaagatgt gctccagggt 150
ccctctgctg ctgccgctgc tctgctact ggccctgggg cctgggggtgc 200
agggtgccc atccggctgc cagtgcagcc agccacagac agtcttctgc 250
actgccgccc aggggaccac ggtgccccga gacgtgccac ccgacacggt 300
ggggctgtac gtctttgaga acggcatcac catgctcgac gcaagcagct 350
ttgccggcct gccgggcctg cagctcctgg acctgtcaca gaaccagatc 400

09944660 "9684660"

00944896 "083101

gcgggtctga gtgtgaggtg ccactcatgg gcttcccagg gcctggcctc 1900
 cagtcacccc tccacgcaaa gccctacatc taagccagag agagacaggg 1950
 cagctggggc cgggctctca gccagtgaga tggccagccc cctcctgctg 2000
 ccacaccacg taagttctca gtcccaacct cggggatgtg tgcagacagg 2050
 gctgtgtgac cacagctggg ccctgttccc tctggacctc ggtctcctca 2100
 tctgtgagat gctgtggccc agctgacgag ccctaacgtc cccagaaccg 2150
 agtgccatg aggacagtgt ccgcccctgcc ctccgcaacg tgcagtcctt 2200
 gggcacggcg ggcccctgcc tgtgctggta acgcatgcct gggcccctgct 2250
 gggctctccc actccaggcg gaccctgggg gccagtgaag gaagctcccg 2300
 gaaagagcag agggagagcg ggtaggcggc tgtgtgactc tagtcttggc 2350
 cccaggaagc gaaggaacaa aagaaactgg aaaggaagat gctttaggaa 2400
 catgttttgc ttttttaaaa tatatatata tttataagag atcctttccc 2450
 atttattctg ggaagatgtt tttcaaactc agagacaagg actttgggtt 2500
 ttgtaagaca aacgatgata tgaaggcctt ttgtaagaaa aaataaaaaa 2550
 aaaaa 2555

<210> 69
 <211> 598
 <212> PRT
 <213> Homo Sapien

<400> 69
 Met Cys Ser Arg Val Pro Leu Leu Leu Pro Leu Leu Leu Leu Leu
 1 5 10 15
 Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys
 20 25 30
 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr
 35 40 45
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
 50 55 60
 Glu Asn Gly Ile Thr Met Leu Asp Ala Ser Ser Phe Ala Gly Leu
 65 70 75
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
 80 85 90
 Leu Arg Leu Pro Arg Leu Leu Leu Leu Asp Leu Ser His Asn Ser
 95 100 105
 Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu

004486-084660

110	115	120
Ala Leu Arg Leu	Ala Gly Leu Gly Leu	Gln Gln Leu Asp Glu Gly
125	130	135
Leu Phe Ser Arg	Leu Arg Asn Leu His	Asp Leu Asp Val Ser Asp
140	145	150
Asn Gln Leu Glu	Arg Val Pro Pro Val	Ile Arg Gly Leu Arg Gly
155	160	165
Leu Thr Arg Leu	Arg Leu Ala Gly Asn	Thr Arg Ile Ala Gln Leu
170	175	180
Arg Pro Glu Asp	Leu Ala Gly Leu Ala	Ala Leu Gln Glu Leu Asp
185	190	195
Val Ser Asn Leu	Ser Leu Gln Ala Leu	Pro Gly Asp Leu Ser Gly
200	205	210
Leu Phe Pro Arg	Leu Arg Leu Leu Ala	Ala Ala Arg Asn Pro Phe
215	220	225
Asn Cys Val Cys	Pro Leu Ser Trp Phe	Gly Pro Trp Val Arg Glu
230	235	240
Ser His Val Thr	Leu Ala Ser Pro Glu	Glu Thr Arg Cys His Phe
245	250	255
Pro Pro Lys Asn	Ala Gly Arg Leu Leu	Leu Glu Leu Asp Tyr Ala
260	265	270
Asp Phe Gly Cys	Pro Ala Thr Thr Thr	Thr Ala Thr Val Pro Thr
275	280	285
Thr Arg Pro Val	Val Arg Glu Pro Thr	Ala Leu Ser Ser Ser Leu
290	295	300
Ala Pro Thr Trp	Leu Ser Pro Thr Ala	Pro Ala Thr Glu Ala Pro
305	310	315
Ser Pro Pro Ser	Thr Ala Pro Pro Thr	Val Gly Pro Val Pro Gln
320	325	330
Pro Gln Asp Cys	Pro Pro Ser Thr Cys	Leu Asn Gly Gly Thr Cys
335	340	345
His Leu Gly Thr	Arg His His Leu Ala	Cys Leu Cys Pro Glu Gly
350	355	360
Phe Thr Gly Leu	Tyr Cys Glu Ser Gln	Met Gly Gln Gly Thr Arg
365	370	375
Pro Ser Pro Thr	Pro Val Thr Pro Arg	Pro Pro Arg Ser Leu Thr
380	385	390
Leu Gly Ile Glu	Pro Val Ser Pro Thr	Ser Leu Arg Val Gly Leu
395	400	405

Gln Arg Tyr Leu Gln Gly Ser Ser Val Gln Leu Arg Ser Leu Arg
 410 415 420
 Leu Thr Tyr Arg Asn Leu Ser Gly Pro Asp Lys Arg Leu Val Thr
 425 430 435
 Leu Arg Leu Pro Ala Ser Leu Ala Glu Tyr Thr Val Thr Gln Leu
 440 445 450
 Arg Pro Asn Ala Thr Tyr Ser Val Cys Val Met Pro Leu Gly Pro
 455 460 465
 Gly Arg Val Pro Glu Gly Glu Glu Ala Cys Gly Glu Ala His Thr
 470 475 480
 Pro Pro Ala Val His Ser Asn His Ala Pro Val Thr Gln Ala Arg
 485 490 495
 Glu Gly Asn Leu Pro Leu Leu Ile Ala Pro Ala Leu Ala Ala Val
 500 505 510
 Leu Leu Ala Ala Leu Ala Ala Val Gly Ala Ala Tyr Cys Val Arg
 515 520 525
 Arg Gly Arg Ala Met Ala Ala Ala Ala Gln Asp Lys Gly Gln Val
 530 535 540
 Gly Pro Gly Ala Gly Pro Leu Glu Leu Glu Gly Val Lys Val Pro
 545 550 555
 Leu Glu Pro Gly Pro Lys Ala Thr Glu Gly Gly Gly Glu Ala Leu
 560 565 570
 Pro Ser Gly Ser Glu Cys Glu Val Pro Leu Met Gly Phe Pro Gly
 575 580 585
 Pro Gly Leu Gln Ser Pro Leu His Ala Lys Pro Tyr Ile
 590 595

<210> 70
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 70
 ccctccactg cccacacgac tg 22

<210> 71
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 71
cggttctggg gacgttaggg ctcg 24

<210> 72
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 72
ctgcccaccg tccacctgcc tcaat 25

<210> 73
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 73
aggactgcc accgtccacc tgcctcaatg ggggcacatg ccacc 45

<210> 74
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 74
acgcaaagcc ctacatctaa gccagagaga gacagggcag ctggg 45

<210> 75
<211> 1077
<212> DNA
<213> Homo Sapien

<400> 75
ggcactagga caaccttctt ccttctgca ccactgcccg tacccttacc 50
cgccccgcca cctccttgct acccactct tgaaaccaca gctgttgga 100
gggtccccag ctcatgccag cctcatctcc tttcttgcta gccccaaag 150
ggcctccagg caacatgggg ggcccagtc gagagccggc actctcagtt 200
gccctctggt tgagttgggg ggcagctctg ggggccgtgg cttgtgccat 250
ggctctgctg acccaacaaa cagagctgca gagcctcagg agagaggtga 300
gccggctgca ggggacagga ggccccctcc agaatgggga agggatatcc 350
tggcagagtc tcccggagca gaggttccgat gccctggaag cctgggagaa 400

0944996-083104

tggggagaga tcccggaaaa ggagagcagt gctcacccaa aaacagaaga 450
 agcagcactc tgtcctgcac ctggttccca ttaacgccac ctccaaggat 500
 gactccgatg tgacagaggt gatgtggcaa ccagctctta ggcgtgggag 550
 aggcctacag gcccaggat atggtgtccg aatccaggat gctggagttt 600
 atctgctgta tagccaggtc ctgtttcaag acgtgacttt caccatgggt 650
 cagggtggtgt ctcgagaagg ccaaggaagg caggagactc tattccgatg 700
 tataagaagt atgccctccc acccggaccg ggcctacaac agctgctata 750
 gcgcagggtgt cttccattta caccaagggg atattctgag tgtcataatt 800
 ccccgggcaa gggcgaaact taacctctct ccacatggaa ccttcctggg 850
 gtttgtgaaa ctgtgattgt gttataaaaa gtggctccca gcttggaaga 900
 ccagggtggg tacatactgg agacagccaa gagctgagta tataaaggag 950
 agggaatgtg caggaacaga ggcattctcc tgggtttggc tccccgttcc 1000
 tcacttttcc cttttcattc ccaccccta gactttgatt ttacggatat 1050
 cttgcttctg ttcccatgg agctccg 1077

<210> 76
 <211> 250
 <212> PRT
 <213> Homo Sapien

<400> 76
 Met Pro Ala Ser Ser Pro Phe Leu Leu Ala Pro Lys Gly Pro Pro
 1 5 10 15
 Gly Asn Met Gly Gly Pro Val Arg Glu Pro Ala Leu Ser Val Ala
 20 25 30
 Leu Trp Leu Ser Trp Gly Ala Ala Leu Gly Ala Val Ala Cys Ala
 35 40 45
 Met Ala Leu Leu Thr Gln Gln Thr Glu Leu Gln Ser Leu Arg Arg
 50 55 60
 Glu Val Ser Arg Leu Gln Gly Thr Gly Gly Pro Ser Gln Asn Gly
 65 70 75
 Glu Gly Tyr Pro Trp Gln Ser Leu Pro Glu Gln Ser Ser Asp Ala
 80 85 90
 Leu Glu Ala Trp Glu Asn Gly Glu Arg Ser Arg Lys Arg Arg Ala
 95 100 105
 Val Leu Thr Gln Lys Gln Lys Lys Gln His Ser Val Leu His Leu
 110 115 120

094496-083101

caggctcagc aggggccagg ggccacactg gacccaaagg gcagaagggc 700
tccatggggg cccctgggga gcggtgcaag agccactacg ccgccttttc 750
ggtagggccg aagaagccca tgcacagcaa ccactactac cagacggtga 800
tcttcgacac ggagttcgtg aacctctacg accacttcaa catgttcacc 850
ggcaagttct actgctacgt gcccggcctc tactttctca gcctcaacgt 900
gcacacctgg aaccagaagg agacctacct gcacatcatg aagaacgagg 950
aggaggtggt gatcttggtc gcgcaggtgg gcgaccgcag catcatgcaa 1000
agccagagcc tgatgctgga gctgagagag caggaccagg tgtgggtacg 1050
cctctacaag ggogaacgtg agaacgccat cttcagcgag gagctggaca 1100
cctacatcac cttcagtggc tacctgggtc agcacgccac cgagccctag 1150
ctggccggcc acctcctttc ctctcgccac cttccacccc tgcgctgtgc 1200
tgacccacc gcctcttccc cgatccctgg actccgactc cctggctttg 1250
gcattcagtg agacgccctg cacacacaga aagccaaagg gatcggtgct 1300
cccagatccc gcagcctctg gagagagctg acggcagatg aaatcaccag 1350
ggcgggggcac ccgcgagaac cctctgggac cttccgcggc cctctctgca 1400
cacatcctca agtgacccccg cacggcgaga cgcgggtggc ggcagggcgt 1450
cccaggggtgc ggcaccgcgg ctccagtcct tggaaataat taggcaaatt 1500
ctaaagggtc caaaaggagc aaagtaaacc gtggaggaca aagaaaaggg 1550
ttgttatattt tgtctttcca gccagcctgc tggctcccaa gagagaggcc 1600
ttttcagttg agactctgct taagagaaga tccaaagtta aagctctggg 1650
gtcaggggag gggccggggg caggaaacta cctctggctt aattctttta 1700
agccacgtag gaactttctt gagggatagg tggaccctga catccctgtg 1750
gccttgccca agggctctgc tggcttttct ggtcacagc tgcgaggtga 1800
tgggggctgg ggccccaggc gtcagcctcc cagagggaca gctgagcccc 1850
ctgccttggc tccaggttgg tagaagcagc cgaagggtc ctgacagtgg 1900
ccagggaccc ctgggtcccc caggcctgca gatgtttcta tgaggggcag 1950
agctccttgg tacatccatg tgtggctctg ctccaccct gtgccacccc 2000
agagccctgg ggggtggtct ccatgcctgc caccctggca tcggctttct 2050
gtgccgctc ccacacaaat cagccccaga agggccccgg gccttggtt 2100

ctgtttttta taaaacacct caagcagcac tgcagtctcc catctcctcg 2150
 tgggctaagc atcacgcgtt ccacgtgtgt tgtgttggtt ggcagcaagg 2200
 ctgateccaga ccccttctgc cccactgcc ctcacccagg cctctgacca 2250
 gtagcctgag aggggctttt tctaggcttc agagcagggg agagctggaa 2300
 ggggctagaa agctcccgt tgtctgtttc tcaggctcct gtgagcctca 2350
 gtcttgagac cagagtcaag aggaagtaca cgtcccaatc acccgtgtca 2400
 ggattcactc tcaggagctg ggtggcagga gaggcaatag cccctgtggc 2450
 aattgcagga ccagctggag cagggttgcg gtgtctccac ggtgctctcg 2500
 ccctgcccac ggccacccca gactctgac tccaggaacc ccatagcccc 2550
 tctccacctc acccatggt gatgccagg gtcactcttg ctaccgctg 2600
 ggccccaaa ccccgcgtgc ctctcttct tccccccatc cccacctgg 2650
 ttttgactaa tctgcttcc ctctctgggc ctggctgccg ggatctgggg 2700
 tccctaagtc cctctcttta aagaacttct gcgggtcaga ctctgaagcc 2750
 gagttgctgt gggcgtgccc ggaagcagag cgccacactc gctgcttaag 2800
 ctccccagc tctttccaga aaacattaaa ctcagaattg tgttttcaa 2849

<210> 78
 <211> 281
 <212> PRT
 <213> Homo Sapien

<400> 78
 Met Gly Ser Arg Gly Gln Gly Leu Leu Leu Ala Tyr Cys Leu Leu
 1 5 10 15
 Leu Ala Phe Ala Ser Gly Leu Val Leu Ser Arg Val Pro His Val
 20 25 30
 Gln Gly Glu Gln Gln Glu Trp Glu Gly Thr Glu Glu Leu Pro Ser
 35 40 45
 Pro Pro Asp His Ala Glu Arg Ala Glu Glu Gln His Glu Lys Tyr
 50 55 60
 Arg Pro Ser Gln Asp Gln Gly Leu Pro Ala Ser Arg Cys Leu Arg
 65 70 75
 Cys Cys Asp Pro Gly Thr Ser Met Tyr Pro Ala Thr Ala Val Pro
 80 85 90
 Gln Ile Asn Ile Thr Ile Leu Lys Gly Glu Lys Gly Asp Arg Gly
 95 100 105
 Asp Arg Gly Leu Gln Gly Lys Tyr Gly Lys Thr Gly Ser Ala Gly

				110						115						120
Ala	Arg	Gly	His	Thr	Gly	Pro	Lys	Gly	Gln	Lys	Gly	Ser	Met	Gly		
				125					130					135		
Ala	Pro	Gly	Glu	Arg	Cys	Lys	Ser	His	Tyr	Ala	Ala	Phe	Ser	Val		
				140					145					150		
Gly	Arg	Lys	Lys	Pro	Met	His	Ser	Asn	His	Tyr	Tyr	Gln	Thr	Val		
				155					160					165		
Ile	Phe	Asp	Thr	Glu	Phe	Val	Asn	Leu	Tyr	Asp	His	Phe	Asn	Met		
				170					175					180		
Phe	Thr	Gly	Lys	Phe	Tyr	Cys	Tyr	Val	Pro	Gly	Leu	Tyr	Phe	Phe		
				185					190					195		
Ser	Leu	Asn	Val	His	Thr	Trp	Asn	Gln	Lys	Glu	Thr	Tyr	Leu	His		
				200					205					210		
Ile	Met	Lys	Asn	Glu	Glu	Glu	Val	Val	Ile	Leu	Phe	Ala	Gln	Val		
				215					220					225		
Gly	Asp	Arg	Ser	Ile	Met	Gln	Ser	Gln	Ser	Leu	Met	Leu	Glu	Leu		
				230					235					240		
Arg	Glu	Gln	Asp	Gln	Val	Trp	Val	Arg	Leu	Tyr	Lys	Gly	Glu	Arg		
				245					250					255		
Glu	Asn	Ala	Ile	Phe	Ser	Glu	Glu	Leu	Asp	Thr	Tyr	Ile	Thr	Phe		
				260					265					270		
Ser	Gly	Tyr	Leu	Val	Lys	His	Ala	Thr	Glu	Pro						
				275					280							

```
<210> 79
<211> 24
<212> DNA
<213> Artificial Sequence
```

<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
cccgggtgctt gcgctgctgt gaccccggtg cctccatgta cccgg 45

<210> 82
<211> 2284
<212> DNA
<213> Homo Sapien

<400> 82
gcggagcatc cgctgcggtc ctgcgcgaga ccccgcgcg gattcgccgg 50
tccttccccg gggcgcgaca gagctgtcct cgcacctgga tggcagcagg 100
ggcgccgggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150
cttcttaaag caaactaaga ccagagggag gattatcctt gacctttgaa 200
gaccaaact aaactgaaat ttaaatgtt cttcggggga gaaggagct 250
tgacttacac tttggtaata atttgcttcc tgacactaag gctgtctgct 300
agtcagaatt gcctcaaaaa gagtctagaa gatgttgtca ttgacatcca 350
gtcatctctt tctaaggga tcagaggcaa tgagcccgtata taaacttcaa 400
ctcaagaaga ctgcattaat tcttgctgtt caacaaaaaa catatcaggg 450
gacaaagcat gtaacttgat gatcttcgac actcgaaaaa cagctagaca 500
acccaactgc tacctatctt tctgtccaa cgaggaagcc tgtccattga 550
aaccagcaaa aggacttatg agttacagga taattacaga ttttccatct 600
ttgaccagaa atttgccaag ccaagagtta cccaggaag attctctctt 650
acatggccaa ttttcacaag cagtcactcc cctagcccat catcacacag 700
attattcaaa gccaccgat atctcatgga gagacacact ttctcagaag 750
tttggatcct cagatcacct ggagaaacta tttaagatgg atgaagcaag 800
tgcccagctc cttgcttata aggaaaaagg ccattctcag agttcacaat 850
tttctctga tcaagaaata gctcatctgc tgctgaaaa tgtgagtgcg 900
ctcccagcta cgggtggcagt tgcttctcca cataccacct cggctactcc 950
aaagcccgcc acccttctac ccaccaatgc ttcagtgaca ccttctggga 1000
cttcccagcc acagctggcc accacagctc cacctgtaac cactgtcact 1050

09944396 083104

SECRET

```
<400> 83
Met  Phe  Phe  Gly  Gly  Glu  Gly  Ser  Leu  Thr  Tyr  Thr  Leu  Val  Ile
      1          5          10          15
```

Ile	Cys	Phe	Leu	Thr	Leu	Arg	Leu	Ser	Ala	Ser	Gln	Asn	Cys	Leu
				20					25					30
Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser	Leu
				35					40					45
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr	Gln
				50					55					60
Glu	Asp	Cys	Ile	Asn	Ser	Cys	Cys	Ser	Thr	Lys	Asn	Ile	Ser	Gly
				65					70					75
Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr	Ala
				80					85					90
Arg	Gln	Pro	Asn	Cys	Tyr	Leu	Phe	Phe	Cys	Pro	Asn	Glu	Glu	Ala
				95					100					105
Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile	Ile
				110					115					120
Thr	Asp	Phe	Pro	Ser	Leu	Thr	Arg	Asn	Leu	Pro	Ser	Gln	Glu	Leu
				125					130					135
Pro	Gln	Glu	Asp	Ser	Leu	Leu	His	Gly	Gln	Phe	Ser	Gln	Ala	Val
				140					145					150
Thr	Pro	Leu	Ala	His	His	His	Thr	Asp	Tyr	Ser	Lys	Pro	Thr	Asp
				155					160					165
Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	Phe	Gly	Ser	Ser	Asp
				170					175					180
His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	Ser	Ala	Gln	Leu
				185					190					195
Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	Gln	Phe	Ser
				200					205					210
Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	Ser	Ala
				215					220					225
Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	Ala
				230					235					240
Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr
				245					250					255
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro
				260					265					270
Val	Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr
				275					280					285
Val	Phe	Thr	Arg	Ala	Ala	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr	Thr
				290					295					300
Ala	Val	Leu	Thr	Thr	Thr	Phe	Gln	Ala	Pro	Thr	Asp	Ser	Lys	Gly

00944896-003101

305	310	315
Ser Leu Glu Thr Ile Pro Phe Thr Glu	Ile Ser Asn Leu Thr Leu	
320	325	330
Asn Thr Gly Asn Val Tyr Asn Pro Thr	Ala Leu Ser Met Ser Asn	
335	340	345
Val Glu Ser Ser Thr Met Asn Lys Thr	Ala Ser Trp Glu Gly Arg	
350	355	360
Glu Ala Ser Pro Gly Ser Ser Ser Gln	Gly Ser Val Pro Glu Asn	
365	370	375
Gln Tyr Gly Leu Pro Phe Glu Lys Trp	Leu Leu Ile Gly Ser Leu	
380	385	390
Leu Phe Gly Val Leu Phe Leu Val Ile	Gly Leu Val Leu Leu Gly	
395	400	405
Arg Ile Leu Ser Glu Ser Leu Arg Arg	Lys Arg Tyr Ser Arg Leu	
410	415	420
Asp Tyr Leu Ile Asn Gly Ile Tyr Val	Asp Ile	
425	430	

<210> 84
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 84
 agggaggatt atccttgacc tttgaagacc 30

<210> 85
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 85
 gaagcaagtg cccagctc 18

<210> 86
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 86
 cgggtccctg ctcttttg 18

<210> 87
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 87
caccgtagct gggagcgac tcac 24

<210> 88
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 88
agtgttaagtc aagctccc 18

<210> 89
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 89
gcttcttgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 90
<211> 957
<212> DNA
<213> Homo Sapien

<400> 90
cctggaagat ggcgccattg gctgggtggcc tgctcaagggt ggtgttcgtg 50
gtcttcgcct ccttgtygtgc ctgggtattcg ggggtacctgc tcgcagagct 100
cattccagat gcacccctgt ccagtgtgtgc ctatagcatc cgcagcatcg 150
gggagaggcc tgtcctcaaa gctccagtc ccaaaaggca aaaatgtgac 200
cactggactc cctgccccatc tgacacctat gcctacagggt tactcagcgg 250
agggtggcaga agcaagtacg ccaaaatctg ctttgaggat aacctactta 300
tgggagaaca gctgggaaat gttgccagag gaataaacat tgccattgtc 350
aactatgtaa ctgggaatgt gacagcaaca cgatgttttg atatgtatga 400
aggcgataac tctggaccga tgacaaagtt tattcagagt gctgctccaa 450
aatccctgct cttcatgggtg acctatgacg acggaagcac aagactgaat 500

aacgatgcc aagaatgccat agaagcactt ggaagtaaag aaatcaggaa 550
 catgaaattc aggtctagct gggatattat tgcagcaaaa ggcttggaaac 600
 tcccttccga aattcagaga gaaaagatca accactctga tgctaagaac 650
 aacagatatt ctggctggcc tgcagagatc cagatagaag gctgcatacc 700
 caaagaacga agctgacact gcagggtcct gagtaaagt gttctgtata 750
 aacaaatgca gctggaatcg ctcaagaatc ttatttttct aaatccaaca 800
 gcccatatct gatgagtatt ttgggtttgt tgtaaaccac tgaacatttg 850
 ctagttgtat caaatcttgg tacgcagtat tttatacca gtattttatg 900
 tagtgaagat gtcaattagc aggaaactaa aatgaatgga aattcttaaa 950
 aaaaaaa 957

<210> 91
 <211> 235
 <212> PRT
 <213> Homo Sapien

<400> 91
 Met Arg Pro Leu Ala Gly Gly Leu Leu Lys Val Val Phe Val Val
 1 5 10 15
 Phe Ala Ser Leu Cys Ala Trp Tyr Ser Gly Tyr Leu Leu Ala Glu
 20 25 30
 Leu Ile Pro Asp Ala Pro Leu Ser Ser Ala Ala Tyr Ser Ile Arg
 35 40 45
 Ser Ile Gly Glu Arg Pro Val Leu Lys Ala Pro Val Pro Lys Arg
 50 55 60
 Gln Lys Cys Asp His Trp Thr Pro Cys Pro Ser Asp Thr Tyr Ala
 65 70 75
 Tyr Arg Leu Leu Ser Gly Gly Gly Arg Ser Lys Tyr Ala Lys Ile
 80 85 90
 Cys Phe Glu Asp Asn Leu Leu Met Gly Glu Gln Leu Gly Asn Val
 95 100 105
 Ala Arg Gly Ile Asn Ile Ala Ile Val Asn Tyr Val Thr Gly Asn
 110 115 120
 Val Thr Ala Thr Arg Cys Phe Asp Met Tyr Glu Gly Asp Asn Ser
 125 130 135
 Gly Pro Met Thr Lys Phe Ile Gln Ser Ala Ala Pro Lys Ser Leu
 140 145 150
 Leu Phe Met Val Thr Tyr Asp Asp Gly Ser Thr Arg Leu Asn Asn
 155 160 165

1950年10月1日

<210> 96
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 96
ctcaagaagc acgcgtactg c 21

<210> 97
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 97
ccaacctcag cttccgcctc tacga 25

<210> 98
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 98
catccaggct cgccactg 18

<210> 99
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 99
tggcaaggaa tgggaacagt 20

<210> 100
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 100
atgctgccag acctgatcgc agaca 25

<210> 101
<211> 19
<212> DNA

TO T E B D " 9 6 8 4 6 6 0

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 10

<223> Synthetic oligonucleotide probe

gggcagaaat ccagccact 19

<211> 18

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

cccttcgcct gcttttga 18

<211> 27

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

gccatctaattgaagcccatcttccca 27

<211> 19

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

ctggcggtgt cctctcctt 19

<211> 21

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

cctcgggtctc ctcattctgtg a 21

<211> 20

<213> Artificial Sequence

68

0044896-083101

<223> Synthetic oligonucleotide probe

<400> 106
tggcccagct gacgagccct 20

<210> 107
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 107
ctcataggca ctcggttctg g 21

<210> 108
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 108
tggctcccag cttggaaga 19

<210> 109
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 109
cagctcttgg ctgtctccag tatgtaccca 30

<210> 110
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 110
gatgcctctg ttcctgcaca t 21

<210> 111
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 111

ggattctaatacgcactcact atagggctgc ccgcaacccc ttcaactg 48

<210> 112
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 112
ctatgaaatt aaccctcact aaagggaccg cagctgggtg accgtgta 48

<210> 113
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 113
ggattctaatacgcactcact atagggccgc cccgccacct cct 43

<210> 114
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 114
ctatgaaatt aaccctcact aaagggactc gagacaccac ctgaccca 48

<210> 115
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 115
ggattctaatacgcactcact atagggccca aggaaggcag gagactct 48

<210> 116
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide probe

<400> 116
ctatgaaatt aaccctcact aaagggacta gggggtggga atgaaaag 48

<210> 117

TOEBO 9684660

<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 117
ggattctaatt acgactcact atagggcccc cctgagctct cccgtgta 48

<210> 118
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 118
ctatgaaatt aaccctcact aaaggggaagg ctcgccactg gtcgtaga 48

<210> 119
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 119
ggattctaatt acgactcact atagggcaag gagccgggac ccaggaga 48

<210> 120
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 120
ctatgaaatt aaccctcact aaagggaggg ggcccttggt gctgagt 47